SpeedDome® Ultra 8 Camera Dome

Configuration Utility
Version 2.14

Operator's Guide

8200-0600-01 C

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Configuration Utility Operator's Guide

Version – 2.14

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Preface: Before You Begin

This preface provides important information that you should be familiar with before using the SpeedDome Ultra 8 camera dome. It includes a document overview, text conventions, a list of related documents, and how to obtain product help.

What's In This Guide?

The SpeedDome Ultra 8 Camera Dome Configuration Utility Operator's Guide is organized as follows:

- ***Chapter 1: Using the Dome Configuration Utility***, describes how to use the SpeedDome Ultra 8 Camera Dome configuration utility.
- ***Chapter 2: Configuring Pan, Tilt, Zoom, and Synchronization Options***, describes how to set the "flip" feature, zoom stop, line lock, and Freeze Frame settings.
- ***Chapter 3: Configuring Camera Features***, describes how to configure camera settings to improve color and low-light performance.
- ***Chapter 4: Configuring Alarms, Areas, Home, Privacy Settings, Presets and Scan Limits***, describes how to configure settings associated with alarm inputs, the home position, and the North setting. In addition, you can also set the boundaries for up to 16 areas; establish left and right scan limits, as well as program presets and Privacy Zones.
- ***Chapter 5: Configuring Text Displayed On-Screen***, describes how to configure settings associated with displaying text on-screen. This includes names and status information, as well as the text format and direction indicators.
- ***Chapter 6: Configuring Language and Password Settings***, describes how to set the language for the menus and prompts. It also describes how to set and enable a password to prevent unauthorized use of the configuration utility.

IMPORTANT

If Portuguese is the selected language, the characters "ã" and "õ" are not available for display on-screen. This is due to a limitation of the dome's text overlay chip.

- ***Chapter 7: Displaying Dome Information*** explains how to display essential information about your dome if service should be required.
- ***Appendix A: SensorNet and RS-422 Command Summary*** provides information about commands specific to using the dome in a SensorNet or RS-422 environment.
- ***Appendix B: Manchester Command Summary*** provides information about commands specific to using the dome in a Manchester environment.
- ***Appendix C: Pelco Coaxitron and "P" Protocols Command Summary*** provides information about features and commands supported by Pelco Coaxitron and "P" protocols.
- ***Appendix D: Panasonic Up-the-Coax (UTC) Protocol Command Summary*** provides information about features and commands supported by Panasonic UTC protocol.

- ***Appendix E: AD Up-the-Coax (UTC) Command Summary*** provides information about features and commands supported by AD UTC protocol.
- ***Appendix F: Vicon Command Summary*** provides information about features and commands supported by Vicon protocol.
- ***Appendix G: Bosch Biphase Protocol*** provides information about features and commands supported by Bosch Biphase protocol.
- ***Appendix H: Dome Configuration Records*** provides a convenient place for listing the configuration information associated with your camera dome.
- ***Appendix I: End User License Agreement*** lists the terms and conditions for using this product.
- ***Glossary*** provides a compilation of terms associated with SpeedDome and camera functions, features, and capabilities.

Text Conventions

This guide uses text in different ways to identify different kinds of information.

Bold Italics	Used for terms specific to the system, and text that requires special emphasis; for example ***Preset***.
Italics	Used for menu selections or settings; for example, *On-screen Text Display*.
Bold	Used for names of buttons; for example, **Zoom**.

Notes are separated by ruled lines. Notes call attention to any items that may be of special importance. Icons identify the type of note.

General information

Tips for using the product more effectively

Important information essential to proper operation of the product

Related Documents

Other sources provide supplemental information about your SpeedDome Ultra 8 camera dome. These sources serve to enhance your understanding of the product and its use.

- The ***SpeedDome Ultra 8 Camera Dome Configuration Utility Quick Reference Guide*** (8200-0600-02) provides a brief overview of how to use the configuration utility.
- The ***SpeedDome Ultra 8 Camera Dome Installation and Service Guide*** (8200-0600-03) provides specific information about the wiring and physical set up of the camera dome.

Getting Help

If you have a question about the operation of this product and cannot find the answer in this manual, consult with your supervisor. If your supervisor cannot answer your question, contact your Sales or Technical Support Representative.

Chapter 1: Using the Dome Configuration Utility

The SpeedDome Ultra 8 camera dome consists of a 35X or 22X optical zoom camera enclosed in compact dome housing. The 35X camera provides a black-and-white mode to enhance images obtained under low lighting conditions. The 35X camera also supports Wide Dynamic Range (WDR), which improves video performance under simultaneous indoor and outdoor lighting conditions, such as looking through an open door or window. In addition, the camera dome supports advanced features, such as 12X digital zoom (up to 420X total zoom), open shutter settings, privacy zones, direction indicators, and freeze frame.

The 22X camera supports advanced features, such as 11X digital zoom (up to 242X total zoom), open shutter settings, privacy zones, direction indicators, and freeze frame.

The Dome Configuration Utility is used to customize the camera dome settings.

This chapter introduces you to the Dome Configuration Utility. It explains how to start the utility, navigate through the menus, and change settings. It also explains where to find specific information about customizing dome settings.

What is the Dome Configuration Utility?

The Dome Configuration Utility provides a means to setting features for your camera dome via a text overlay menu. You access this utility using a keystroke combination on your camera controller. The utility provides settings relating to camera functions, alarms, text display, privacy zones, direction indicators and password protection. Some items supplement similar features that may be available through your controller.

Refer to your controller operating instructions for information about button locations mentioned in this document.

Starting the Dome Configuration Utility

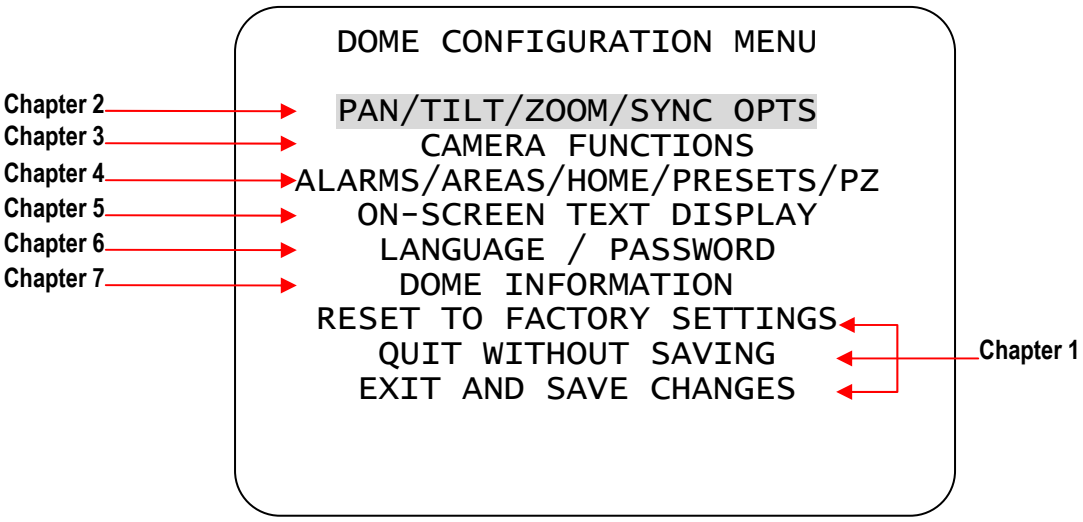
The Dome Configuration Utility is started using a series of keyboard commands. Depending on the controller and network protocol in use, the commands required to start the configuration utility differ.

- If the dome is installed in a ***SensorNet*** or ***RS-422*** environment, press and hold **Iris Open**, press and hold a **Focus** button (**near** or **far**), then press **Zoom Out** (**Zoom Wide**).
- If the dome is installed in a ***Manchester*** environment, place the controller in programming mode (turn the keyswitch to **Prog**), enter **66**, and press **Set Preset** (**Set Shot**).

Note: Other protocols and controllers may also be supported. The Appendixes located at the end of this manual provide additional information.

The following menu appears on the monitor:

Figure 1. Dome Configuration Menu



I M P O R T A N T

If you have password protection enabled for the configuration utility, the ***Enter Password*** screen appears first. You must correctly enter the password before the *Dome Configuration Menu* will appear. For information about entering the password, refer to ***Entering the Dome's Password*** on page 10.

Working with the Dome Configuration Utility

Once the *Dome Configuration Menu* is displayed, you can select a menu item, and then modify the settings you want to change. The following table summarizes the controller commands for ***SensorNet***, ***RS-422***, and ***Manchester*** protocols. For combination keystrokes, press and hold each button in sequence, then release.

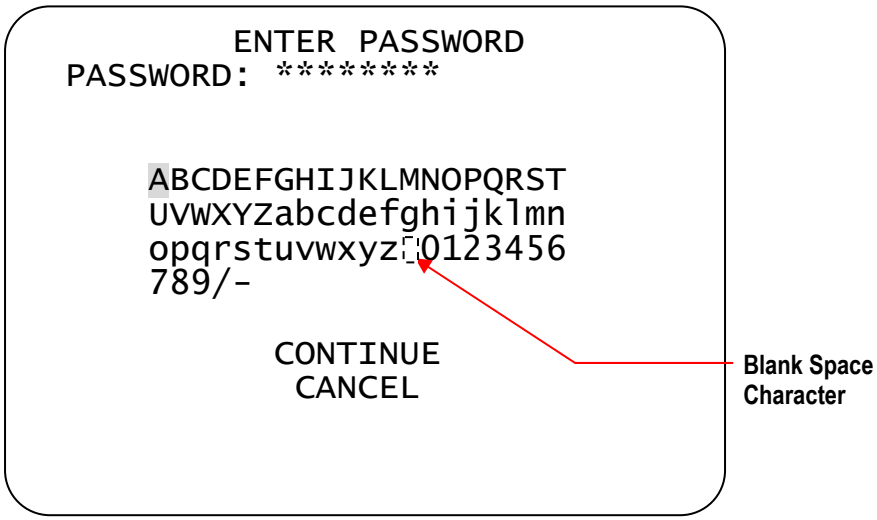
Table 1. Controller commands

If you want to …	Use …
Move the ***highlight bar.***	**Pan/Tilt**
Select the highlighted item on the screen.	**Focus**
Increase the value of the selected setting or display the ***next choice*** for the setting	**Zoom In**
Decrease the value of the selected field, or display the ***previous choice*** for the field.	**Zoom Out**
During naming, move the cursor to the ***right*** of the current character in the name.	**Zoom In**
During naming, move the cursor to the ***left*** of the current character in the name.	**Zoom Out**
Save changes and exit the utility from any screen.	**Iris Close,** then **Focus**

Entering the Dome's Password

A dome password can be used to prevent unauthorized users from starting the configuration utility. If password protection is enabled, the ***Enter Password*** screen appears when the command to start the configuration utility is entered.

Figure 2. Enter Password screen



Users must enter the password before the Dome Configuration Menu displays. The password can be from ***1 to 8 characters*** long.

To enter the password using SensorNet, RS-422, or Manchester protocols:

1. Use the **Pan/Tilt** control to move the highlight the appropriate character.
2. Press **Focus** to enter the highlighted character.

If you need to change a character that has been entered:

- **Zoom In** moves the cursor to the right in the ***Password*** field.
- **Zoom Out** moves the cursor to the left in the ***Password*** field.

As each character in the password is selected, asterisks (*) appear in the ***Password*** field. When you have finished entering the password, select ***Continue***. If the correct password has been entered, the *Dome Configuration Menu* appears. If the correct password was not entered, the ***Enter Password*** screen remains on the monitor.

If you do not want to start the configuration utility, select ***Cancel*** to return to normal dome operation.

IMPORTANT

If you forget the password, contact your Sales Representative for assistance.

For information about programming and enabling password protection, see ***Chapter 6: Configuring Language and Password Settings*** on page 82.

Restoring Factory Settings

Some screens provide a choice to *restore factory settings*. This choice applies only to those settings currently displayed on the screen. To reset all configuration settings, choose ***Reset to Factory Settings*** from the *Dome Configuration Menu*. The following prompt appears:

Reset to Factory Settings

No

Press **Zoom** to display the options.

- If you want to restore the factory settings, select ***Yes***.
- If you do not want to restore the factory settings, select ***No***.

Press **Focus** to accept the displayed option.

I M P O R T A N T

! Selecting ***Reset to Factory Settings*** from the *Dome Configuration Menu* does not change the following settings: *Camera Name*, *Alarm Names*, *Area Names*, *Preset Names*, *Pattern Names*, *Area Boundaries*, *Privacy Zones*, and *Presets*. To reset names to the default settings, see ***Chapter 5: Configuring Text Displayed On-Screen***.

Exiting the Configuration Utility

Under SensorNet, RS-422, and Manchester protocols, you can save your changes and exit the utility from any screen by pressing and holding **Iris Close**, then pressing **Focus**. From the *Dome Configuration Menu*, you have two choices for exiting the utility: ***Exit and Save Changes*** or ***Quit Without Saving***. Use the **Pan/Tilt** control to move the highlight bar up and down on the screen.

- If you want to keep the changes you made, move the highlight bar to ***Exit and Save Changes***, and select. The utility closes.
- If you want to exit without making changes, move the highlight bar to ***Quit Without Saving***, and select. The following prompt appears on the screen:

Data Not Saved, Quit Anyway?

No

Press **Zoom** to display the options.

- To cancel the changes, select ***Yes***.
- To keep the changes, select ***No***. If you choose ***No***, the *Dome Configuration Menu* is displayed.

Press **Focus** to accept the displayed option.

IMPORTANT

The following settings do not restore when selecting *Quit Without Saving* from the *Dome Configuration Menu*: ***Area Boundaries*** and ***AGC/Shutter Limit***.

Accessing the DirectSet Menu

The DirectSet Menu provides easy access to commonly used SpeedDome Ultra 8 camera dome features when used with compatible controllers. This allows you to change or activate features without starting the dome configuration menu. Four pages of menu options are available for the 35X camera dome (Figure 3 through Figure 6 below) and the 22X camera dome (Figure 7 through Figure 10 on page 14).

Note: Some DirectSet menu features are not supported by the 22X camera dome. Each menu feature description in Table 2 beginning on page 15 shows which camera dome supports that feature.

Figure 3. DirectSet Menu (35X)–Page 1 of 4

```
 0 TOGGLE DIRECT SET MENU
 1 DOME CONFIG MENU
 2 AUTO IRIS & AUTO FOCUS
 3 FLIP
 4 PEEL PATTERN
 5 SET NORTH POSITION
 6 LINE LOCK OFF
 7 LINE LOCK ON
10 NIGHT MODE
FOCUS FAR=next page
```

Figure 4. DirectSet Menu (35X)–Page 2 of 4

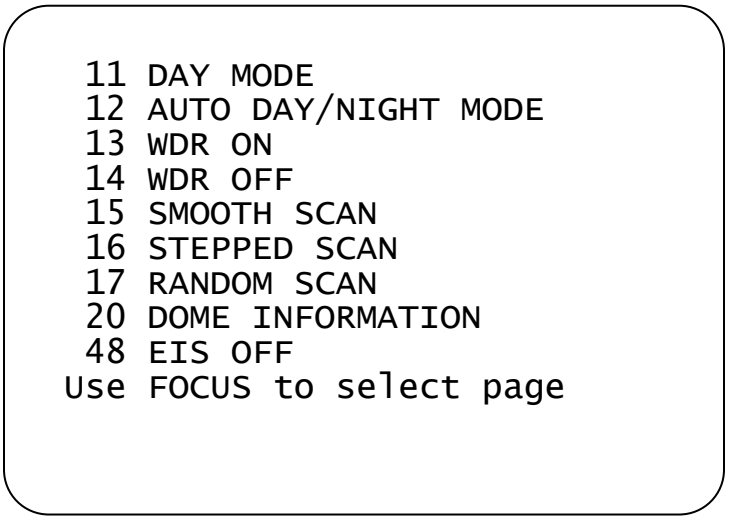


Figure 5. DirectSet Menu (35X)–Page 3 of 4

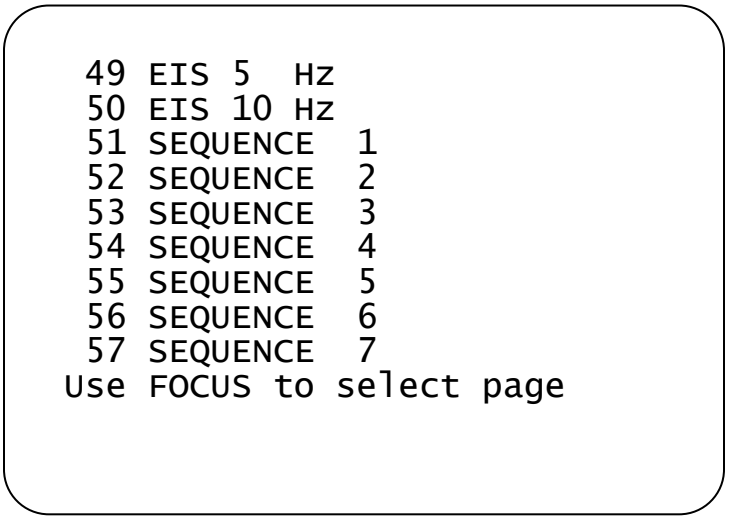


Figure 6. DirectSet Menu (35X)–Page 4 of 4

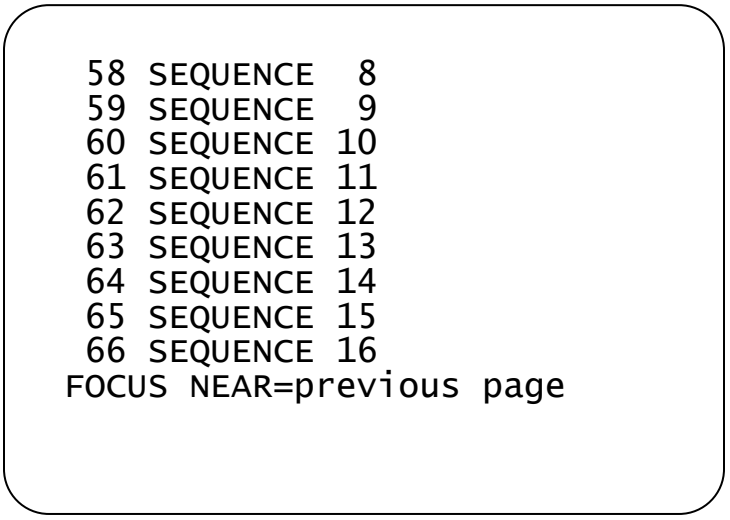


Figure 7. DirectSet Menu (22X) –Page 1 of 4

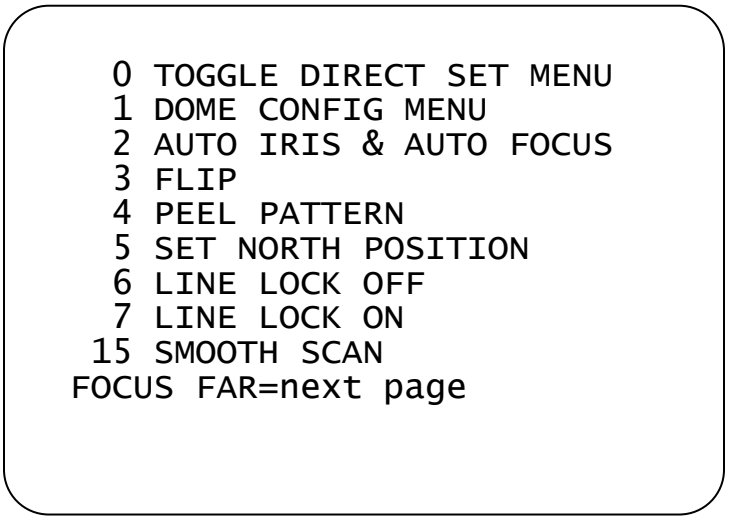


Figure 8. DirectSet Menu (22X)–Page 2 of 4

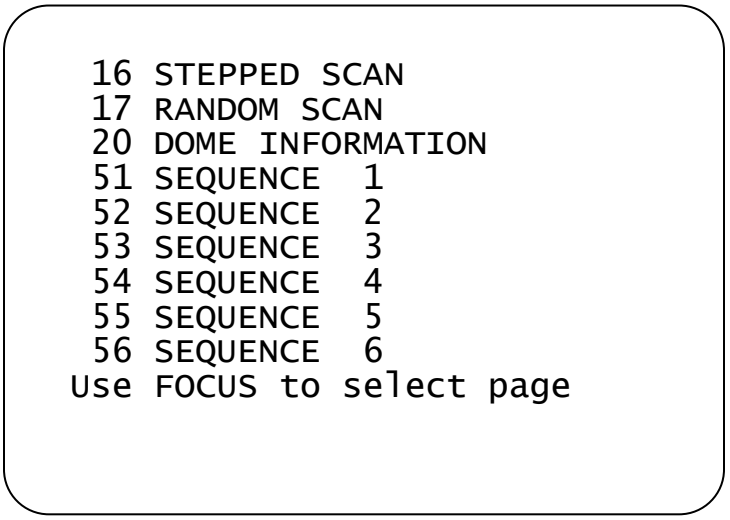


Figure 9. DirectSet Menu (22X)–Page 3 of 4

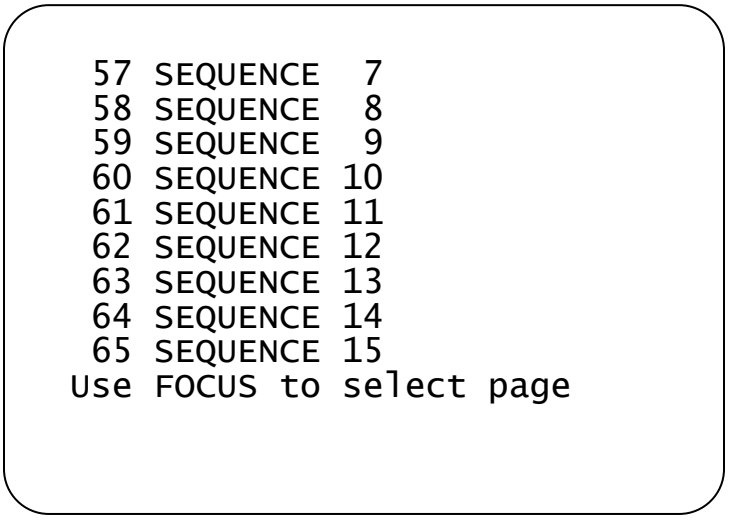
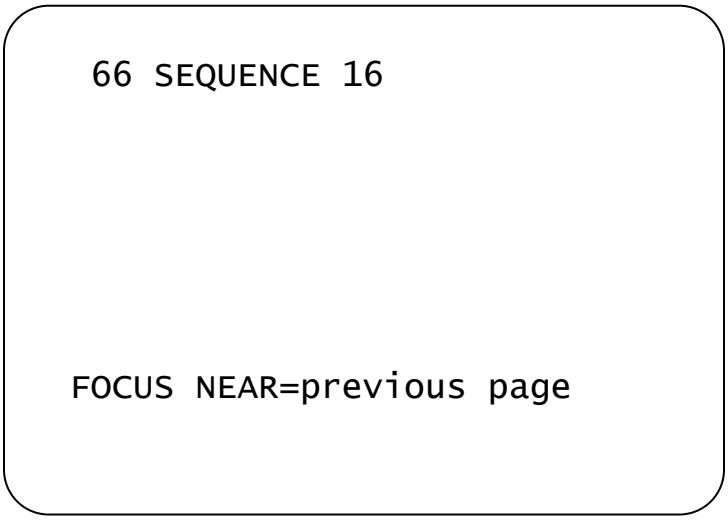


Figure 10. DirectSet Menu (22X)–Page 4 of 4



To access a feature on the menu, enter the number and press the DirectSet button (varies by controller). To display the different pages of the menu, press **Focus Far** or **Focus Near**. Table 2 provides a description of the available features.

Table 2. DirectSet commands

DirectSet Command	Description
0+DirectSet	(35X/22X) Toggle DirectSet Menu: Toggles between displaying and hiding the DirectSet menu.
1+ DirectSet	(35X/22X) Dome Config Menu: Displays the SpeedDome Ultra configuration menu.
2+ DirectSet	(35X/22X) Auto Iris/Auto Focus: Resumes Auto Focus/Auto Iris mode.
3+ DirectSet	(35X/22X) Flip: Rotates the SpeedDome 180° from its current pointing direction. This is the same as pressing the Flip button on compatible controllers.
4+ DirectSet	(35X/22X) Peel Pattern: Runs the default Apple Peel Pattern. This is the same as pressing the Peel button on compatible controllers.
5+ DirectSet	(35X/22X) Set North Position:
6+ DirectSet	(35X/22X) Line Lock Off:
7+ DirectSet	(35X/22X) Line Lock On:
10+ DirectSet	(35X) Night Mode: Sets the dome IR mode setting to ON. The dome switches to full-time black-and-white (B/W) mode.
11+ DirectSet	(35X) Day Mode: Sets the dome IR mode setting to OFF. The dome switches to full-time color mode.

DirectSet Command	Description
12+ DirectSet	(35X) Auto Day/Night Mode: Resumes the most recently selected automatic IR mode setting. • Auto High: B/W mode activates ~30 lux. • Auto Mid: B/W mode activates ~3 lux. • Auto Low: B/W mode activates ~0.5 lux.
13+ DirectSet	(35X) WDR On: Enables Wide Dynamic Range (WDR). Use this setting when both bright and low light areas need to be viewed simultaneously.
14+ DirectSet	(35X) WDR Off: Disables Wide Dynamic Range (WDR). Use this setting when the light level is constant or when changes in lighting conditions are gradual.
15+ DirectSet	(35X/22X) Smooth Scan: Initiates a smooth 360° clockwise rotation around the dome axis using the current tilt, zoom and focus settings.
16+ DirectSet	(35X/22X) Stepped Scan: Initiates a clockwise rotation around the dome axis pausing briefly every 10° (at 1X zoom) for 3 seconds using the current tilt, zoom and focus settings.
17+ DirectSet	(35X/22X) Random Scan: Initiates a clockwise or counter-clockwise rotation around the dome axis using the current tilt, zoom and focus settings. The dome pauses randomly as it rotates around the axis.
20+ DirectSet	(35X/22X) Dome Information: Displays the *Dome Information* screen available through the dome configuration menu.
48+ DirectSet	(35X) EIS Off:
49+ DirectSet	(35X) EIS 5Hz
50+ DirectSet	(35X) EIS 10Hz
51+ DirectSet	(35X/22X) Sequence: Runs Sequence 1
52+ DirectSet	(35X/22X) Sequence: Runs Sequence 2
53+ DirectSet	(35X/22X) Sequence: Runs Sequence 3
54+ DirectSet	(35X/22X) Sequence: Runs Sequence 4
55+ DirectSet	(35X/22X) Sequence: Runs Sequence 5
56+ DirectSet	(35X/22X) Sequence: Runs Sequence 6
57+ DirectSet	(35X/22X) Sequence: Runs Sequence 7
58+ DirectSet	(35X/22X) Sequence: Runs Sequence 8
59+ DirectSet	(35X/22X) Sequence: Runs Sequence 9
60+ DirectSet	(35X/22X) Sequence: Runs Sequence 10
61+ DirectSet	(35X/22X) Sequence: Runs Sequence 11

DirectSet Command	Description
62+ DirectSet	(35X/22X) Sequence: Runs Sequence 12
63+ DirectSet	(35X/22X) Sequence: Runs Sequence 13
64+ DirectSet	(35X/22X) Sequence: Runs Sequence 14
65+ DirectSet	(35X/22X) Sequence: Runs Sequence 15
66+ DirectSet	(35X/22X) Sequence: Runs Sequence 16
255+ DirectSet	(35X/22X) Reset Dome

Refer to your controller instructions to determine if the DirectSet Menu is supported.

Keeping Records for the Dome's Settings

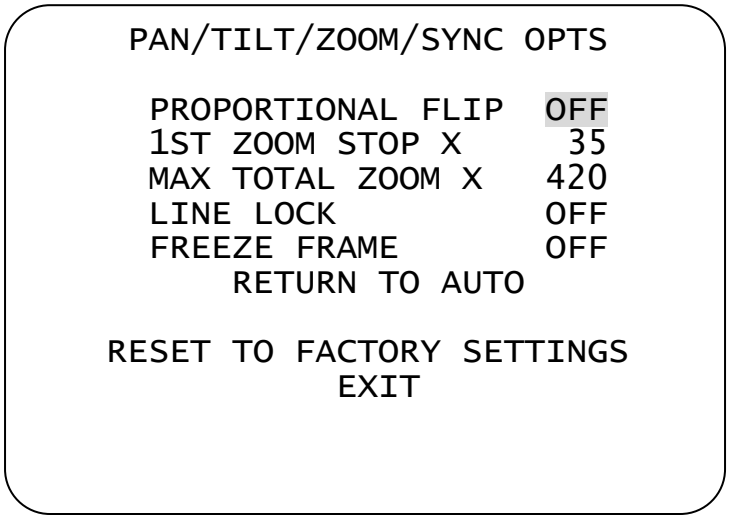
Keep records for each SpeedDome Ultra 8 camera dome installed at your facility. ***Appendix H: Dome Configuration Records*** summarizes the default values for each configuration setting. Space is provided for documenting the settings you change. Note any changes you make to the dome settings.

Chapter 2: Configuring Pan, Tilt, Zoom, and Synchronization Options

This chapter describes the use of the ***Pan/Tilt/Zoom/Sync Opts*** menu. Use this screen to set the *Auto Flip* feature, configure the *Zoom Stop* settings, set the *Line Lock* option, and configure the *Freeze Frame* setting.

When ***Pan/Tilt/Zoom/Sync Opts*** is selected from the *Dome Configuration Menu*, the following screen appears:

Figure 11. Pan/Tilt/Zoom/Sync Options screen



Use this screen to enable or disable the "automatic flip" feature, configure the zoom stop settings, and set the line lock options.

- To change the settings, move the highlight bar to appropriate field and make the changes.
- To change the settings for this screen to the factory defaults, select ***Reset to Factory Settings***.
- To return to the *Dome Configuration Menu*, select ***Exit***.

Setting the Automatic "Flip" Feature

Use the automatic (proportional) "flip" feature when you need to track someone who walks directly under the dome and continues on the other side. You start the flip by moving the tilt control to its lower limit and holding for a brief period. When the flip engages, the dome automatically rotates 180°. You may then continue to track the person as long as the tilt control stays in its lower limit. Once the tilt control is released, the dome resumes normal operation.

The dome is initially installed with the automatic flip feature disabled. In this situation, the dome stops when the tilt down reaches its lower limit.

Changing the Automatic Flip Setting

1. Select ***Pan/Tilt/Zoom/Sync Opts*** from the *Dome Configuration Menu*.

   The highlight bar appears on the ***Proportional Flip*** setting.

2. Change the setting.
   - Select ***On*** to enable the flip feature.
   - Select ***Off*** to disable the flip feature.

   The default setting is Off.

3. Select ***Exit***. The *Dome Configuration Menu* appears.

Adjusting the Zoom Stop Settings

Zoom stop settings define how the zoom function is partitioned. Depending on the current zoom level, the camera will either stop at the first zoom stop setting or continue to the maximum zoom setting.

22X Camera Dome

The SpeedDome Ultra 8 22X camera dome includes a ***22X*** optical zoom camera with ***11X*** digital zoom capability. The maximum possible zoom is ***242X***.

The following example explains how 22X camera zoom stop settings work.

The default 22X camera settings are ***33X*** for the first zoom stop setting and ***88X*** for the maximum zoom setting. If the current zoom level is less than 33X, pressing **Zoom In** continuously causes the zoom to stop at 33X. If the zoom level is 33X or greater, pressing **Zoom In** continuously causes the zoom to stop at the maximum zoom setting of 88X. The second zoom stop remains in effect until the zoom function is reduced to less than the first zoom stop setting (33X) and the zoom button is released for one second or longer. To achieve higher zoom levels, change the maximum zoom setting.

2X is the margin of error for the zoom stop settings.

Changing the 22X Camera Zoom Stop Settings

1. Select ***Pan/Tilt/Zoom/Sync Opts*** from the *Dome Configuration Menu*.

2. To change the first zoom stop, continue with step 3. To change the maximum zoom setting, go to step 5.

3. Move the highlight bar to ***1st Zoom Stop X***, and change the setting.
   - Select ***22*** to set the first zoom stop to *22X* magnification.
   - Select ***33*** to set the first zoom stop to *33X* magnification.

   The default setting is 33X.

4. To change the maximum zoom setting, continue with step 5. Otherwise, go to step 6.

5. Move the highlight bar to the ***Max Total Zoom X*** setting, and change the value of the setting.

   - The values for this setting are: ***44, 66, 88, 110, 132, 154, 198, 220,*** and ***242X*** magnification.

   The default maximum zoom setting is 88X.

6. Select ***Exit***. The *Dome Configuration Menu* appears.

35X Camera Dome

The SpeedDome Ultra 8 35X camera dome includes a ***35X*** optical zoom camera with ***12X*** digital zoom capability. The maximum possible zoom is ***420X***.

The following example explains how 35X camera zoom stop settings work.

The default camera settings are ***52X*** for the first zoom stop setting and ***140X*** for the maximum zoom setting. If the current zoom level is less than 52X, pressing **Zoom In** continuously causes the zoom to stop at 52X. If the zoom level is 52X or greater, pressing **Zoom In** continuously causes the zoom to stop at the maximum zoom setting of 140X. The second zoom stop remains in effect until the zoom function is reduced to less than the first zoom stop setting (52X) and the zoom button is released for one second or longer. To achieve higher zoom levels, change the maximum zoom setting.

Changing the 35X Camera Zoom Stop Settings

1. Select ***Pan/Tilt/Zoom/Sync Opts*** from the *Dome Configuration Menu*.
2. To change the first zoom stop, continue with step 3. To change the maximum zoom setting, go to step 5.
3. Move the highlight bar to ***1st Zoom Stop X***, and change the setting.

   - Select ***35*** to set the first zoom stop to *35X* magnification.
   - Select ***52*** to set the first zoom stop to *52X* magnification.

   The default setting is 52X.

4. To change the maximum zoom setting, continue with step 5. Otherwise, go to step 6.
5. Move the highlight bar to the ***Max Total Zoom X*** setting, and change the value of the setting.

   - The values for the setting are: ***71, 94, 117, 140, 163, 186, 209, 232, 255, 278, 301, 324, 347, 370, 393,*** and ***420X*** magnification.

   The default maximum zoom setting is 140X.

6. Select ***Exit***. The *Dome Configuration Menu* appears.

Configuring the Line Lock Setting

Use the ***Line Lock*** setting to prevent vertical rolling or adjust the appearance of overlay text on color monitors.

If you experience problems with vertical video rolling when switching multiple cameras to a single monitor, enabling the *Line Lock* setting phase locks the video with the AC power line. All cameras connected to the same power supply will be synchronized. This synchronization prevents the video from rolling vertically when cameras are switched.

With the Line Lock disabled, the appearance of text displayed on color monitors may be improved. However, the video will no longer be phase locked with the AC power line. Video may roll vertically when switching between cameras.

Changing the Line Lock Setting

1. Select ***Pan/Tilt/Zoom/Sync Opts*** from the *Dome Configuration Menu*.
2. Move the highlight bar to ***Line Lock***. Change the setting.
   - Select ***On*** to enable the line lock. This phase locks the video with the AC power line to prevent video rolling.
   - Select ***Off*** to disable the line lock. This stops the phase lock, but may improve the appearance of text displayed on color monitors.

     The default setting is Off.
3. Select ***Exit***. The *Dome Configuration Menu* appears.

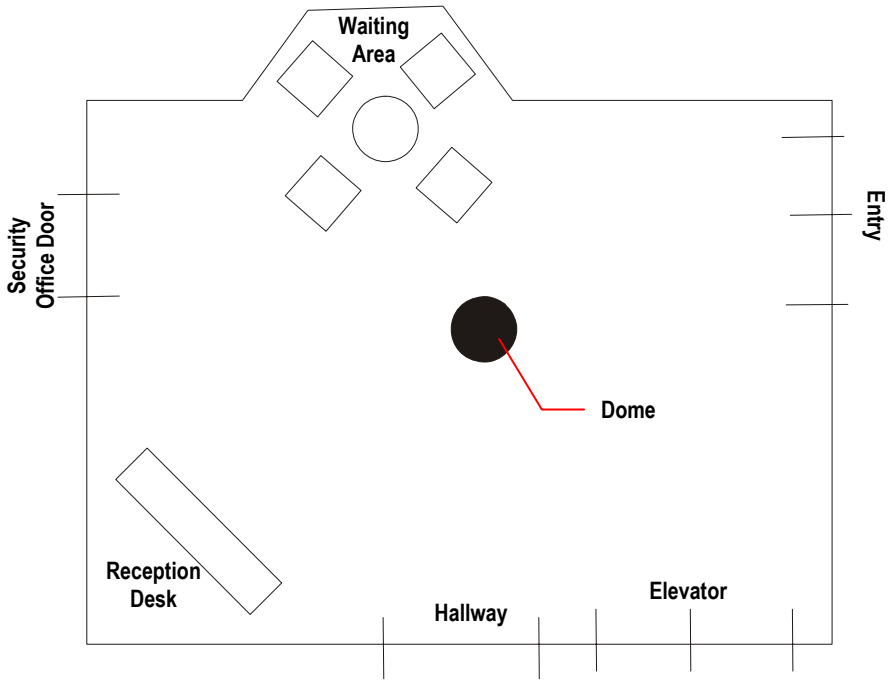
Configuring the Freeze Frame Setting

If you need to maintain a static image when calling automatic functions, such as presets or patterns, use the Freeze Frame setting. This prevents the display of the dome movement and lens adjustments from being displayed on-screen while the preset or pattern is being sought.

When the Freeze Frame setting is enabled, the scene currently displayed on the monitor will be preserved (frozen) on-screen until the pattern or preset is ready for display. The image then switches smoothly to the new scene. You may want to use this setting if using a digital video recorder.

For example, if the dome is installed in a lobby of a busy building, you may want to program presets that show different areas in the lobby. Figure 12 shows a sample floor plan for the lobby.

Figure 12. Lobby Floor Plan



If Freeze Frame is disabled, each time the dome points to a different preset, you will see the dome movement to the new scene, as well as any lens adjustments that are required. For example, if the dome is currently pointing at Reception Desk, and the preset number assigned to the Entry is selected, you will see a blur of motion as the dome quickly pans past other areas in the lobby before focusing on the Entry scene.

If Freeze Frame is enabled, the current scene is displayed on-screen until all dome movement and lens adjustments are complete. For example, the Reception Desk scene will be frozen on-screen until the dome completes the movement and lens adjustments necessary to display the selected preset. When the adjustments are finished, the Entry scene is automatically displayed.

Changing the Freeze Frame Setting

1. Select ***Pan/Tilt/Zoom/Sync Opts*** from the *Dome Configuration Menu*.
2. Move the highlight bar to ***Freeze Frame***. Change the setting.
   - Select ***On*** to enable Freeze Frame. This freezes the current scene when presets or patterns are selected.
   - Select ***Off*** to disable Freeze Frame. This displays the dome motion and lens adjustments when presets or patterns are selected.

     The default setting is Off.
3. Select ***Exit***. The Dome Configuration Menu appears.

Freeze Frame Performance Notes

The Freeze Frame feature allows the current image to be maintained on-screen when switching to a preset or pattern. If presets or patterns are included as part of a sequence or tour, the total movement and lens adjustment time should be included as part of the dwell time to ensure that the scene will be displayed before moving to the next scene.

Note: This information also applies if you attempt to rapidly call up a series of presets or patterns without allowing the dome to adjust to the final position for the preset or pattern.

For example, if it takes 2 seconds for the dome to adjust from displaying Preset 1 to Preset 2, the 2 second adjustment time should be factored into the sequence/tour dwell time. If the dwell time is set for 10 seconds, only 8 seconds of live video from the Preset 2 will be seen before the next event in the sequence is displayed.

The following formula may be useful when calculating actual viewing time for events in a sequence or tour:

Dwell Time – Dome Adjustment Time = Actual Viewing Time

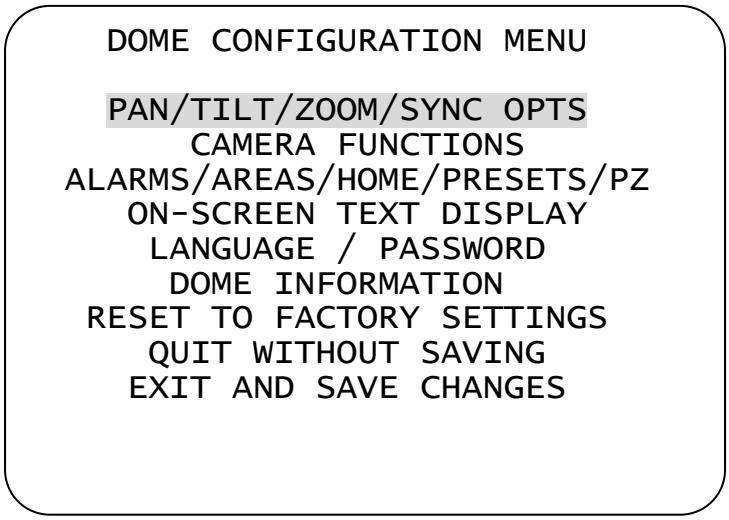
Return to Auto After Calling a Preset

When calling a Preset, the SpeedDome Ultra camera adopts the IR Mode and EIS setting uniquely created for that Preset. When an operator moves the dome from its Preset position, the dome can return to global IR Mode and EIS settings only if programmed to do so through the ***Return to Auto*** screen.

Follow the steps below to program ***Return to Auto***:

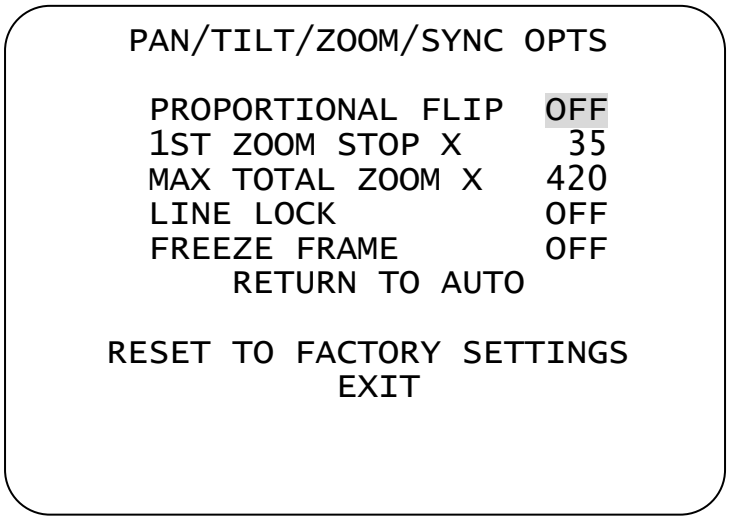
1. Access the *Dome Configuration Menu* by pressing **Iris Open**, **Focus Far**, and **Zoom Out** on your controller.

Figure 13. Dome Configuration Menu



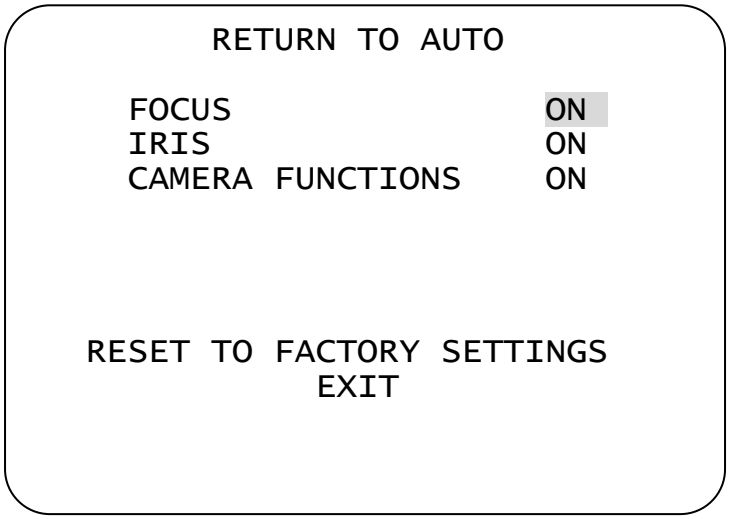
2. Use the joystick to highlight ***Pan / Tilt / Zoom / Sync Opts***, and press **Focus Far** to select. The *Pan / Tilt / Zoom / Sync Opts* screen appears.

Figure 14. Pan/Tilt/Zoom/Sync Options screen



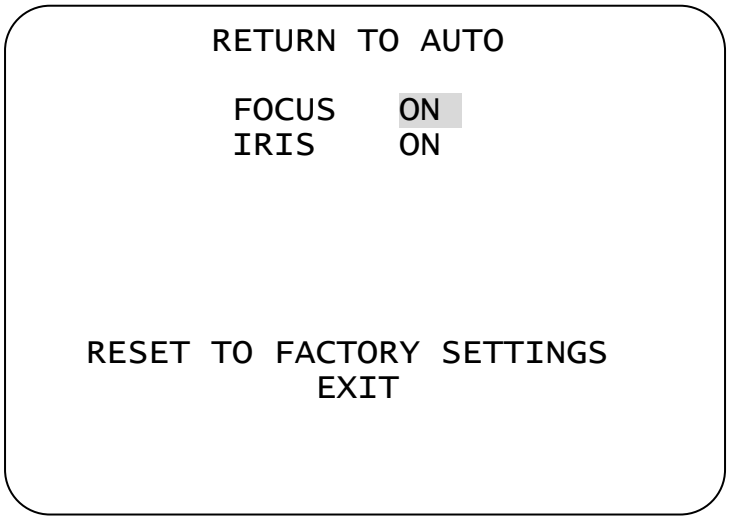
3. Use the joystick to highlight ***Return to Auto***, and press **Focus Far** to select. The *Return to Auto* screen appears.

Figure 15. Return to Auto screen (35X)



Note: The Camera Functions auto return feature is only available on 35X camera domes and does not appear on the 22X camera dome ***Return to Auto*** screen.

Figure 16. Return to Auto screen (22X)



4. Use the joystick to highlight each field (**Focus, Iris,** and **Camera Functions**). Select either **On** or **Off** as your global camera default setting for each field.
5. Use the joystick to highlight ***Exit***, and press **Focus Far** to select. When you reach the *Dome Configuration Menu*, highlight ***Exit and Save Changes***, and press **Focus Far**.

Note: The **Reset to Factory Settings** field resets only the fields on the ***Return To Auto*** screen.

Chapter 3: Configuring Camera Features

This chapter describes the settings used to control the camera features. It describes how to change the *white balance* settings, *IR mode*, *wide dynamic range* settings, *automatic gain control (AGC)*, and *open shutter* settings to improve camera performance.

Note: The IR mode, WDR, and EIS features are only available on 35X camera domes. These features do not appear on the 22X camera dome Camera Functions menu.

When ***Camera Functions*** is selected from the *Dome Configuration Menu*, one of the following screens appears:

Figure 17. Camera Functions screen (35X)

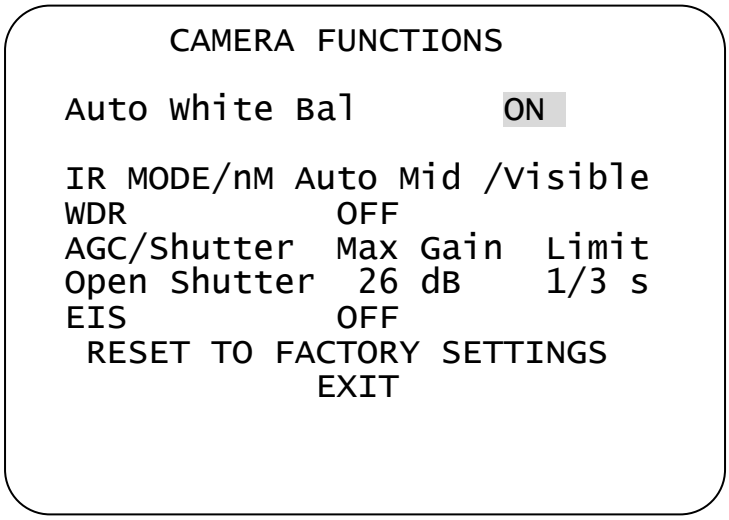
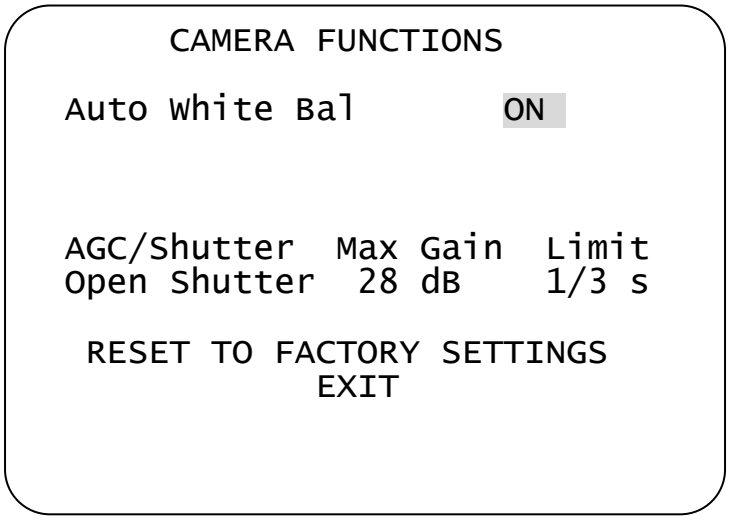


Figure 18. Camera Functions screen (22X)



- To change settings, move the highlight bar to the appropriate field and make the desired changes.
- To change the settings for this screen to the factory defaults, select ***Reset to Factory Settings***.
- To return to the *Dome Configuration Menu*, select ***Exit***.

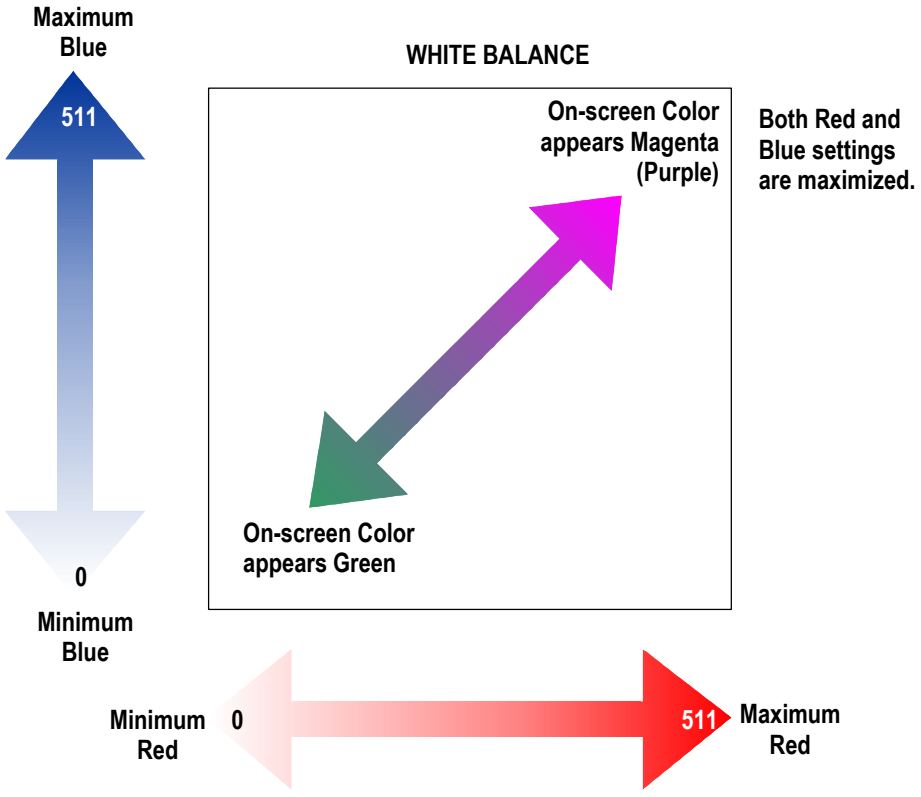
Adjusting White Balance Settings

White balance is normally compensated for by the automatic white balance gain control. In some lighting conditions, you may need to manually adjust the red and blue settings for optimal viewing.

When *Automatic White Balance* is enabled, the red and blue setting values are based on feedback from the camera. When *Automatic White Balance* is disabled, the camera uses the red and blue setting values to control the white balance. When *Automatic White Balance* is first switched from *On* to *Off*, the red and blue values displayed are based on the current feedback from the camera. The red and blue values range from 0 to 511. Changes occur in increments of 5.

The following chart illustrates the red and blue settings relationship to white balance.

Figure 19. White Balance color relationships



As the value for the red setting increases, the image appears more red. As the value decreases, the image appears less red.

As the value for the blue setting increases, the image appears more blue. As the value decreases, the image appears less blue.

As the values for both the red and blue settings are increased, the image appears more magenta (purple). As the values for both the red and blue settings are decreased, the image appears more green.

Tip: ***Auto White Bal*** must be set to ***Off*** to manually change the ***Red*** and ***Blue*** settings. Changes to the red and blue settings occur in increments of ***5***.

Changing Automatic White Balance Settings

1. Select ***Camera Functions*** from the *Dome Configuration Menu*. The highlight appears on the *Auto White Bal* setting.
2. Change the setting.
   - Select ***Off*** to manually adjust the red or blue settings. Continue with step 3.
   - Select ***On*** for automatic white balance. Continue with step 7.

   The default setting is On.
3. Do one of the following:
   - To change the red setting, move the highlight bar to ***W Bal Adj: Red***, and then continue with step 4.
   - To change the blue setting, continue with step 5.
4. Adjust the red setting. The values range from ***0 to 511*** and change in increments of **5**.

   There is no default value for the red setting.
5. Do one of the following:
   - To change the blue setting, move the highlight bar to ***Blue***, then continue with step 6.
   - If you are finished making changes, continue with step 7.
6. Adjust the blue setting. The values range from ***0 to 511*** and change in increments of **5**.

   There is no default value for the blue setting.
7. Select ***Exit***. The *Dome Configuration Menu* appears.

Understanding How IR (Black & White) Mode Operates

Note: The IR mode feature is only available on 35X camera domes.

The SpeedDome Ultra 8 camera dome provides a black-and-white (B/W) mode to improve camera performance when the light level falls below certain thresholds. This allows clear images to be obtained under low-light conditions. This is referred to as ***IR Mode.*** There are

five IR Mode settings: ***Off***, ***nM On***, ***nM Auto High***, ***nM Auto Mid***, and ***nM Auto Low***. Table 3 lists the approximate lux values when the camera is expected to switch between color and B/W modes. Actual values depend on the current zoom setting of the camera and the light source.

Table 3. IR Mode approximate lux parameters

IR Mode Setting	Camera Performance	B/W Mode Activates	B/W Mode Deactivates
Off	No B/W capabilities	N/A	N/A
nM On	Full-time B/W mode	N/A	N/A
nM Auto High	Cleanest possible picture No field integration effect	~30 lux	~135-155 lux
nM Auto Mid (Default)	Minimizes field integration effect	~3 lux	~20-25 lux
nM Auto Low	Maximizes color low-light performance	~.5 lux	~10-12 lux

For more information, see the following topics:

- ***Changing the IR Mode Setting***
- ***Manually Activating or Deactivating the IR Mode***

Changing the IR Mode Setting

1. Select ***Camera Functions*** from the *Dome Configuration Menu*.
2. Move the highlight to the ***IR Mode*** field. Change the setting.
   - Select ***OFF*** to disable the IR mode. The camera will operate in color mode only.
   - Select ***nM ON*** to enable full-time B/W mode.
   - Select ***nM Auto High*** to enable automatic B/W mode at approximately 30 lux.
   - Select ***nM Auto Mid*** to enable automatic B/W mode at approximately 3 lux.
   - Select ***nM Auto Low*** to enable automatic B/W mode at approximately .5 lux.

   The default setting is Auto Mid.
3. Select ***Exit***. The *Dome Configuration Menu* appears.

Manually Activating or Deactivating the IR Mode

The IR mode may be activated or deactivated using a combination of keyboard commands. This allows you to change between color and B/W modes as needed.

- To change the mode using ***SensorNet*** or ***RS-422*** protocols: press and hold **Iris Open**, press and hold **Focus Far**, then press **Focus Near**.
- To change the mode using ***Manchester*** protocol: enter **68**, and then press **Call Preset**.

Using the manual command has the following affect on the menu settings:

Table 4. IR Mode menu settings

If the current IR Mode setting is...	The setting changes to...
IR Mode nM On	***IR Mode Off***
IR Mode Off	***IR Mode nM On***
IR Mode nM Auto High, nM Auto Mid, or ***nM Auto Low***	***IR Mode nM On***

Tip: If you need to resume ***nM Auto High***, ***nM Auto Mid***, or ***nM Auto Low*** IR mode settings, you must use the *Dome Configuration Menu*. See ***Changing the IR Mode Setting*** on page 29.

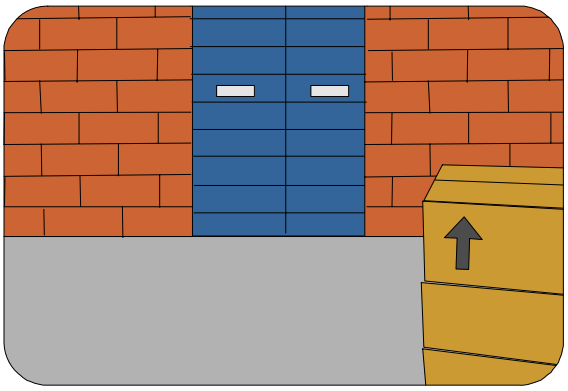
Understanding Wide Dynamic Range

Note: The Wide Dynamic Range feature is only available on 35X camera domes.

Wide Dynamic Range (WDR) is a feature that allows clear viewing of both bright and low light areas in a scene. Use this feature if you need to view both indoor and outdoor lighting conditions simultaneously.

For example, a dome is installed in the loading dock area of a building. When the door to the loading dock area is closed Figure 20, the light level remains constant and the interior scene can be viewed clearly without iris adjustments.

Figure 20. Example scene of a loading dock with the door closed

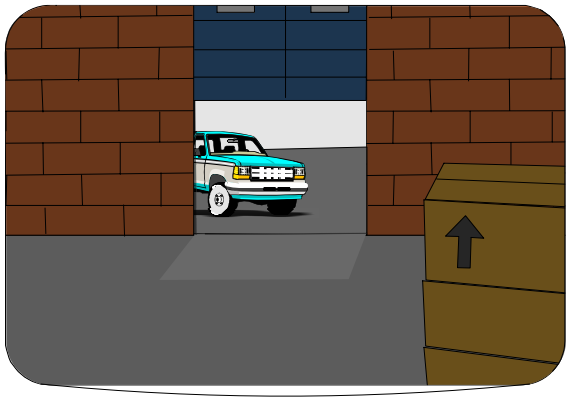


When the door is open, additional light from outside enters the room and distortion occurs. Without WDR, you could adjust the iris of the camera to compensate for the lighting change;

however you cannot clearly see both activities inside and outside of the loading dock area simultaneously.

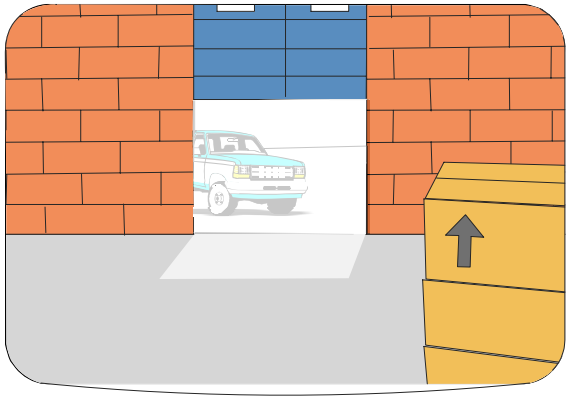
For example, if you close the iris, the outside scene will improve, but the interior scene will become too dark to view clearly. In Figure 21, the car near the loading dock door can be seen clearly, but the interior of the room appears too dark.

Figure 21. Example scene of loading dock with door open and iris close adjustment



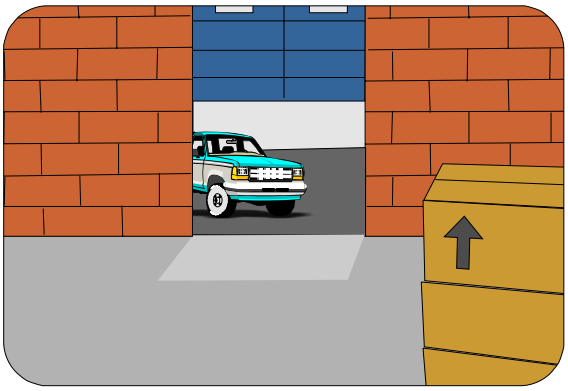
If you want to view the interior scene, open the iris to make the dark scene appear brighter. However, this causes the outdoor scene to appear too bright. In Figure 22, it is difficult to see the car near the loading dock door.

Figure 22. Example scene with loading dock door open and iris open adjustment



With WDR enabled, you can see the scenes both inside and outside the loading dock area. In Figure 23, you can see the boxes stacked inside the loading dock area and the car approaching the door.

Figure 23. Example scene with loading dock door open and WDR enabled



Note: When WDR is enabled, you might notice a slight flicker to the video image. This is a normal characteristic of WDR operation.

Changing the Wide Dynamic Range Setting

1. Select ***Camera Functions*** from the *Dome Configuration Menu*.
2. Move the highlight to the *WDR* field, and then change the setting.
   - Select ***OFF*** to disable WDR. Use this setting when the light level is constant or changes in lighting conditions are gradual.
   - Select ***ON*** to enable WDR. Use this setting when both bright- and low-light areas need to be viewed simultaneously.

   The default setting is OFF.
3. Select ***Exit***. The *Dome Configuration Menu* appears.

Note: When Electronic Image Stabilization (EIS) is enabled, the Wide Dynamic Range feature cannot be enabled and does not display on the *Camera Functions* screen.

Working with AGC and Open Shutter Settings

The SpeedDome Ultra 8 camera dome provides settings for compensating for low-light scenes in color: *Automatic Gain Control* and *Open Shutter*. Automatic Gain Control (AGC) amplifies the video signal in scenes with minimal light. Many low-light scenes result in picture noise. As gain is increased, the picture noise is also amplified.

When AGC is enabled, the camera automatically adjusts the gain setting value. When AGC is disabled, no gain is applied to the video signal. This may make the video appear darker on the monitor.

The gain setting for the camera differs from the maximum gain (*Max Gain*) setting available on the *Camera Functions* menu. The *Max Gain* setting is an upper limit for how much gain can be increased when AGC is enabled. The trade-off between picture level (brightness) and noise may be adjusted by setting the *Max Gain* value. Lower values for *Max Gain* setting may result in a darker picture with less noise. Higher values for *Max Gain* setting may result in a brighter picture with more noise.

In addition to the AGC settings, you may also adjust the Open Shutter settings to improve dome performance in low light situations.

Understanding How Advanced Shutter Settings Improve Low-Light Performance

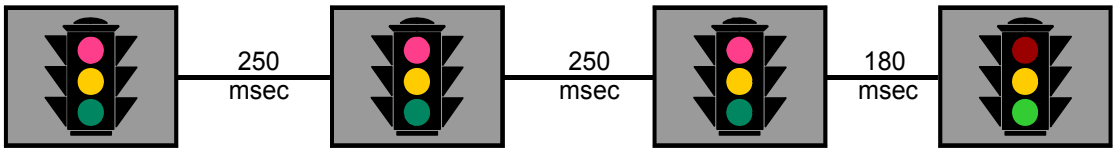
The camera dome supports the ability to view color images from extremely low-light situations. This feature is called ***Open Shutter*** and is only in effect during low-light situations where an image would not be obtainable otherwise. It does not affect the camera performance in normal or bright light situations.

When the Open Shutter is enabled ***and*** the scene illumination is too low to obtain a clear image at the normal video rate, the camera collects luminance information from multiple fields. As it does so, the current video information is retransmitted until new information is available from the camera. Under these conditions, moving objects will appear blurred, and still images may appear blurred, choppy, and with more static than video obtained under normal lighting conditions.

The ***Shutter Limit*** value sets the video update time in fractions of a second. Depending on the lighting conditions, the video information may be updated more frequently, but no slower than the limit set.

Figure 24 illustrates a Shutter Limit of 1/4.

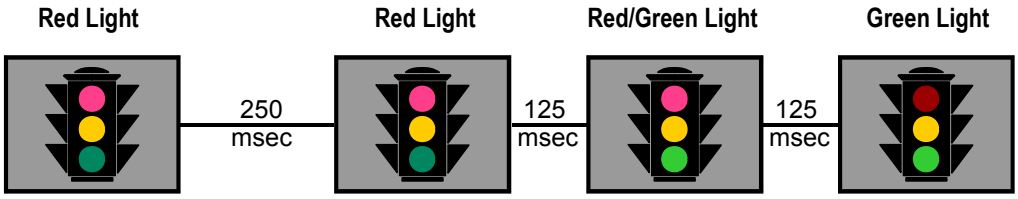
Figure 24. Graphical view of Shutter Limit settings



In this example, the dome receives information about the color of the traffic light. While the light is red, the image is relatively static. With the shutter limit set to 1/4 second (250 milliseconds), updated red light information is transmitted at 1/4-second intervals. When the light changes from red to green, updated light color information becomes available. The dome must now transmit information about the green light. This update occurs as soon as the green light information is available. This may occur before the 1/4-second interval elapses. In this example, the light changed to green after 180 milliseconds. Thereafter the green light information is transmitted at 1/4-second intervals until new light color information becomes available.

If the light were to change from red to green halfway through the field integration interval (125 milliseconds), it may appear that both the red and green lights are on simultaneously. This situation is illustrated in Figure 25.

Figure 25. Mixed field integration



Adjusting the Shutter Limit sets the update time used to maintain the image quality. If you want to videotape an incident in low-light conditions, you may find that tape quality is not acceptable. To ensure that the videotape quality is acceptable for possible prosecution purposes, you may want to test the Shutter Limit settings under the expected lighting conditions.

The Relationship between AGC and Open Shutter Settings

The following table shows which settings can be changed based on the current AGC/Shutter setting.

Table 5. AGC and Open Shutter Relationships

AGC/Shutter Setting	Max Gain	Limit
AGC Off	N/A	N/A
AGC On	NTSC: 10–32dB (35X camera) NTSC: 0–28dB (22X camera) PAL: 0–29dB (both 35X and 22X)	N/A
Open Shutter	NTSC: 10–32dB (35X camera) NTSC: 0–28dB (22X camera) PAL: 0–29dB (both 35X and 22X)	NTSC: 1/2–1/60 PAL: 2/3–1/50

Configuring AGC and Open Shutter Settings

1. Select ***Camera Functions*** from the *Dome Configuration Menu*.
2. Move the highlight to *AGC/Shutter* mode field. The highlight appears in the first field (AGC/ Mode).
3. Select one of the following:
   - Select ***AGC On*** to set AGC to automatic mode. This allows you to adjust the maximum AGC gain setting (in decibels). Continue with step 4.
   - Select ***AGC Off*** to set the AGC to minimum level. You cannot adjust the maximum AGC gain or shutter limit settings. Continue with step 7.
   - Select ***Open Shutter*** to enable field integration. This allows you to adjust the maximum AGC gain and shutter limit settings. Continue with step 4.

     The default setting is Open Shutter.
4. Move the highlight to *Max Gain* field. Change the setting. The following settings are available:
   - For 22X cameras, the setting values range from ***0 to 28dB***.
   - For 35X cameras, the setting values range from ***10 to 32dB***.

5. If you have selected ***Open Shutter*** and need to change the shutter limit setting, continue below. Otherwise, continue with step 7.
6. Move the highlight to the *Limit* field. Change the setting. The following settings are available:
   - For NTSC cameras, the setting values range from ***1/2 to 1/60***.
   - For PAL cameras, the setting values range from ***2/3 to 1/50***.

   The default setting is 1/4 for NTSC and 1/3 for PAL.
7. Select ***Exit***. The *Dome Configuration Menu* appears.

Setting Up Electronic Image Stabilization (EIS)

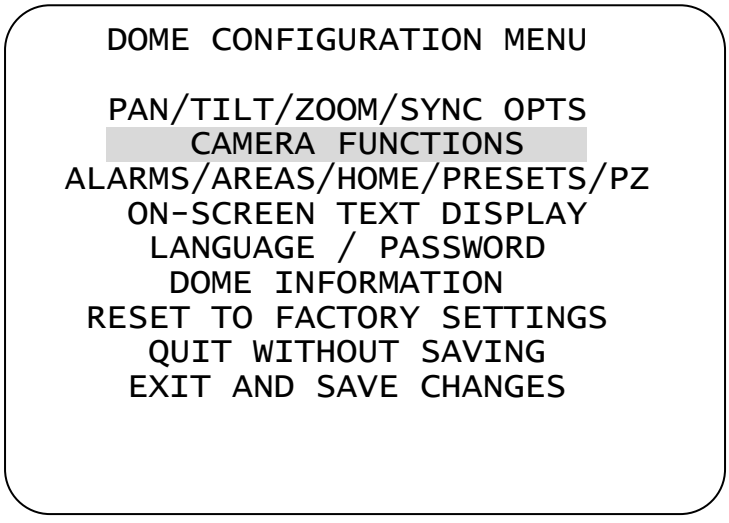
Note: The EIS feature is only available on 35X camera domes.

You can turn off EIS or adjust the EIS sensitivity level for 35X cameras on your system through the Camera Functions screen.

Follow the steps below:

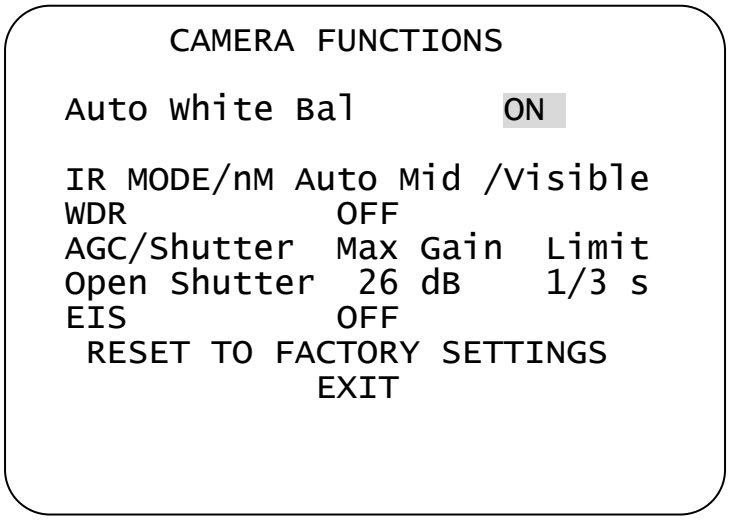
1. Access the *Dome Configuration Menu* (Figure 26) by pressing **Iris Open**, **Focus Far**, and **Zoom Out** on your controller.

Figure 26. Dome Configuration Menu



2. Use the joystick to highlight **Camera Functions** and press **Focus Far** to select. The *Camera Functions* screen (Figure 27) appears.

Figure 27. Camera Functions screen



3. Make your desired changes. EIS settings provide the following choices:

   - **10 Hz** = Default setting designed to stabilize the dome when unwanted dome movements are at 10 Hz.
   - **5 Hz** = Designed to stabilize the dome when unwanted dome movements are at 5 Hz.
   - **Off** = Turns off Electronic Image Stabilization.

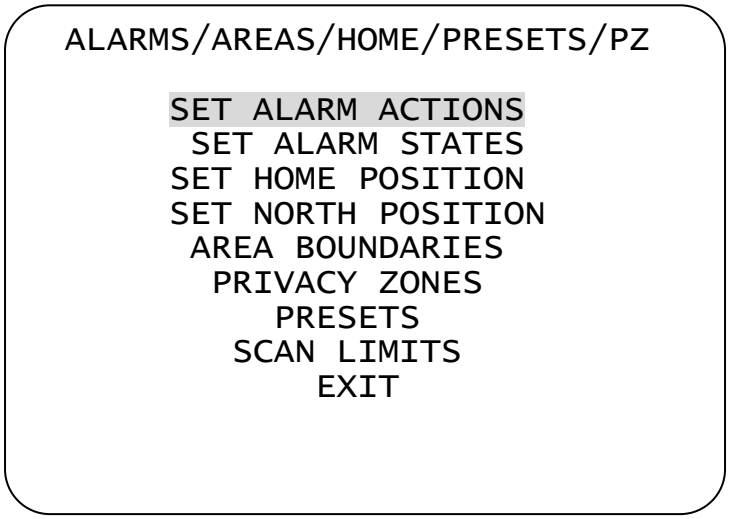
Note: When EIS is enabled, the WDR feature cannot be enabled and does not appear on the *Camera Functions* screen.

Chapter 4: Configuring Alarms, Areas, Home, Privacy Settings, Presets and Scan Limits

This chapter describes settings associated with *Alarms*, *Areas*, the *Home Position*, *Privacy Zones*, *Presets* and *Scan Limits*. It explains how to set a default action to run when a dome alarm occurs, as well as how to define the normal alarm input states. It describes how to set a default position for the dome and assign a dome position that corresponds with North. It also explains how to program Areas, Privacy Zones, Presets and Scan Limits.

When ***Alarms/Areas/Home/Presets/PZ*** is selected from the *Dome Configuration Menu*, the following screen appears:

Figure 28. Alarms/Areas/Home/Presets/PZ screen



From this menu you can choose to configure alarm actions, configure normal states for alarm inputs, assign the "home position," establish the north position for the dome, set area boundaries, set privacy zones, and program presets.

- To make changes, select a menu item to display the associated settings.
- To change the settings, move the highlight bar to appropriate field and make the changes.
- To return to the *Dome Configuration Menu*, select ***Exit***.

Configuring Alarm Actions

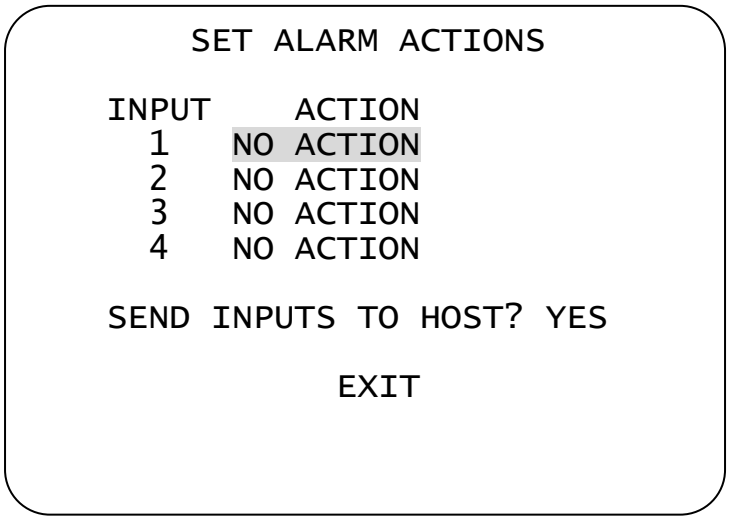
I M P O R T A N T

When operating on *Manchester networks*, the dome can be programmed to respond to any of the four available alarm inputs. However, the dome cannot transmit alarm input states to the host controller. If transmitting the alarm state to the host controller is required, the alarm device must be wired directly to the host controller.

The dome provides four alarm inputs. By connecting alarm devices, such as smoke alarms, twilight sensors, or motion sensors, to these inputs, you can enhance the usability of your video surveillance system. You can further improve your video surveillance by assigning a dome action, such as a preset or pattern, to start whenever an alarm input changes from normal to abnormal.

When ***Set Alarm Actions*** is selected from *Alarms/Areas/Home/Presets/PZ* screen, the following screen appears:

Figure 29. Set Alarm Actions screen



Use this screen to assign a preset or pattern to occur whenever the alarm's input state changes from normal to abnormal. You may also choose to have no action occur when the alarm's input state changes.

Alarms can be processed internally by the dome, externally by the controller, or both. You may choose to send changes in the input state to the host controller. If the changes in input state are sent to the host controller, the host actions have higher priority than the associated dome actions.

Note: An active internal alarm only resets when the input state changes to "normal." A manual reset ***is not*** available.

Setting Alarm Actions

I M P O R T A N T

Some controllers allow the alarm actions for domes to be specified at the controller. See the appendixes for information about which controllers support this function. Do not use both the dome configuration utility and the controller to assign the alarm actions for the same input.
Use only the dome configuration utility or the controller to the assign the alarm actions.

1. Select ***Alarms/Areas/Home/Presets/PZ*** from the *Dome Configuration Menu*.
2. Select ***Set Alarm Actions***.

   The *Set Alarm Action* screen appears.
3. Move the highlight bar to the appropriate alarm input. Change the setting.
   - Select from the following alarm actions: ***Preset, Pattern, Output, Sequence, Random Scan, Stepped Scan,*** or ***Smooth Scan***.
   - Select ***No Action*** if you do not want to set an alarm action. Continue with step 6.

     The default setting is No Action.
4. Move the highlight bar to the ***Action*** field and select the action number.
   - For *preset*, select the number from ***1 through 96***. Continue with step 5.

     Note: The protocol (or controller) used may support fewer presets. Refer to the appropriate Appendix for additional information.

   - For *pattern*, select the number from ***1 through 3*** for the pattern you want to assign. Continue with step 5.

     If the selected pattern is not programmed, the dome runs the Apple Peel pattern.
   - For *output*, select the number from ***1 through 3*** for the output you want to assign. Continue with step **5**.
   - For *sequence*, select the number from ***1 through 16*** for the sequence you want to assign. Continue with step 5.
   - For *random scan, stepped scan, and smooth scan,* continue with step 5.
5. If you need to make additional changes to the alarm actions for this dome, repeat steps 3 and 4. When finished, continue with step 6.
6. Move the highlight bar to ***Send Inputs to Host?***
   - Choose ***Yes*** to forward changes in input states to the host controller.
   - Choose ***No*** to prevent changes in the input states from being forwarded to the host controller.

     The default setting is Yes.
7. Select ***Exit*** to return to the *Alarm/Areas/Home/PZ* screen.

8. When the *Alarm/Areas/Home/PZ* screen appears, select ***Exit***. The *Dome Configuration Menu* appears.

Configuring Normal Input States for Alarms

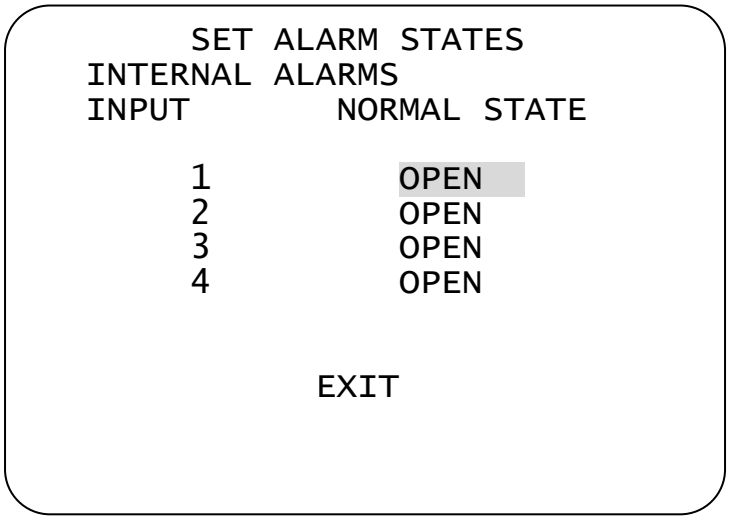
I M P O R T A N T

Some controllers allow the normal input states for domes to be specified at the controller. These controllers include VM96, AD matrices with AD2083-02A code units or AD168 matrix with the AD168CCM or AD2083-02A code unit. Do not use both the dome configuration utility and the controller to assign the normal input states. ***Use only the dome configuration utility or the controller to assign the normal input states.***

The normal input state for an alarm is the state that the device maintains when an alarm is not occurring. For example, you have a smoke detector connected to a dome input. Under normal circumstances, the smoke detector should not be detecting smoke. When smoke is detected, the alarm input changes states (from open to closed) and an alarm is issued.

To configure the normal state for the alarm, select ***Set Alarm States*** from the *Alarm/Areas/Home/Presets/PZ* screen. The following screen appears:

Figure 30. Set Alarm States screen



Use this screen to assign open or closed as the normal state for the dome alarm inputs. When an input state changes from normal to abnormal *and* an internal alarm action is associated with the input, the alarm is triggered. The normal state is used by both internal alarms and controller defined alarms.

IMPORTANT

When operating on *Manchester networks*, the dome can be programmed to respond to any of the four available alarm inputs. However, the alarm input states cannot be transmitted to the host controller. If transmitting the alarm input state to the host controller is required, the alarm device must be wired directly to the host controller.

Setting Alarm Input States

1. Select ***Alarms/Areas/Home/Presets/PZ*** from the *Dome Configuration Menu*.
2. Select ***Set Alarm States***.
3. Select the appropriate input line, and then change the setting.
   - Select ***Open*** if the alarm normal input state is open.
   - Select ***Closed*** if the alarm normal input state is closed.

   The default setting is Open.

Note: In most cases, the normal input state for a dome's input should match the contact type of the connected switch.

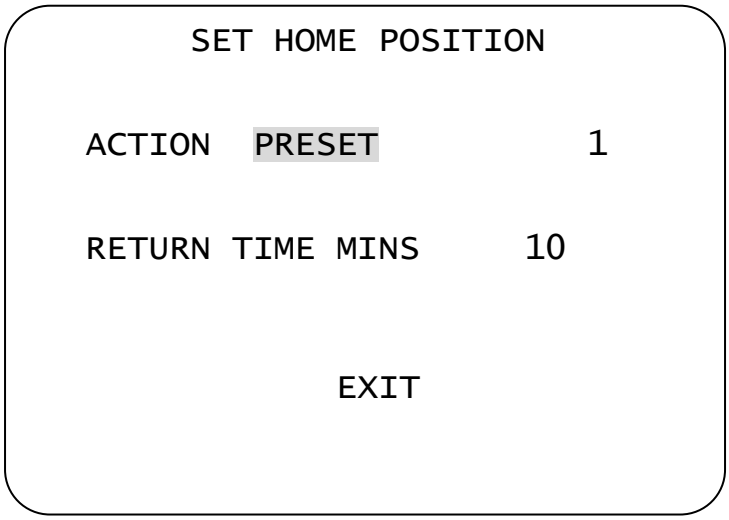
4. Repeat step 3 for each input requiring change. When finished, continue with step 5.
5. Select ***Exit*** to return to the *Alarms/Areas/Home/Presets/PZ screen*.
6. When the *Alarms/Areas/Home/Presets/PZ screen* appears, select ***Exit***. The *Dome Configuration Menu* appears.

Assigning the Dome's Home Position

The home position is a preset or pattern that automatically runs after a designated period of dome inactivity. Use this option if you want to keep a specific area to be under surveillance whenever the dome is not moving.

To assign the home position, select ***Set Home Position*** from the *Alarms/Areas/Home/Presets/PZ screen*. The following screen (Figure 31) appears:

Figure 31. Set Home Position screen



Tip: When a pattern is selected as the home position, the pattern runs until stopped manually by issuing a camera command, such as **Tilt** or **Focus**.

Setting the Home Position

1. Select ***Alarms/Areas/Home/Presets/PZ*** from the *Dome Configuration Menu*.
2. Select ***Set Home Position***.

   The highlight bar appears on the ***Home Position*** setting.
3. Select a setting.

   - Select from the following home positions: ***Preset, Pattern, Output, Sequence, Random Scan, Stepped Scan,*** or ***Smooth Scan***.

     Refer to ***Understanding Scan Limits*** on page 64 for additional details.
   - Select ***No Action*** if you do not want to set a home position. Continue with step 5.

     The default setting is No Action.
4. Move the highlight bar to the ***Number*** field, and select a number.

   - For *preset*, select the number from ***1 through 96***. Continue with step 5.

     Note: The protocol used may support fewer presets. Refer to the appropriate Appendix for additional information.

   - For *pattern*, select the number from ***1 through 3*** for the pattern you want to assign. Continue with step 5.

If the selected pattern is not programmed, the dome runs the Apple Peel pattern.

- For *output*, select the number from ***1 through 3*** for the output you want to assign. Continue with step 5.
- For *sequence*, select the number from ***1 through 16*** for the sequence you want to assign. Continue with step 5.
- For *random scan, stepped scan, and smooth scan,* continue with step 5.

5. Move the highlight bar to ***Return Time Mins***. Set the amount of time that the dome must remain inactive before returning to the home position.

   - The setting ranges from ***1 to 60 minutes***.

   The default setting is 10 minutes.

6. Select ***Exit*** to return to the *Alarms/Areas/Home/Presets/PZ screen*.

Note: If you selected a preset that has not been programmed, preset programming automatically starts. See ***Changing Camera Functions and Motion Detection Setup within Presets*** on page 59.

7. When the *Alarms/Areas/Home/Presets/PZ* screen appears, select ***Exit***. The *Dome Configuration Menu* appears.

Setting the North Position

Direction Indicators permit you to understand the approximate pointing position of the dome to an established reference point. This reference point is called "North" and may correspond to magnetic north (if it is known) or some other landmark or fixture. When the dome is initially installed, "North" defaults to a pre-defined position (0° pan/tilt). You may program the "North" position to be any point along the dome's pan axis (also called ***azimuth***).

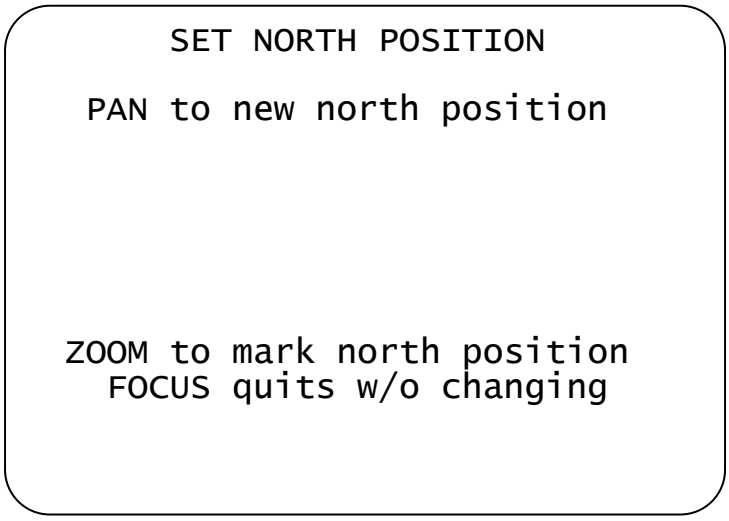
For more information about Direction Indicators, see ***Chapter 5: Configuring Text Displayed On-Screen***.

Programming the North Position

1. Select ***Alarms/Areas/Home/Presets/PZ*** from the *Dome Configuration Menu*.
2. Select ***Set North Position***.

   The following screen (Figure 32) appears:

Figure 32. Set North Position screen



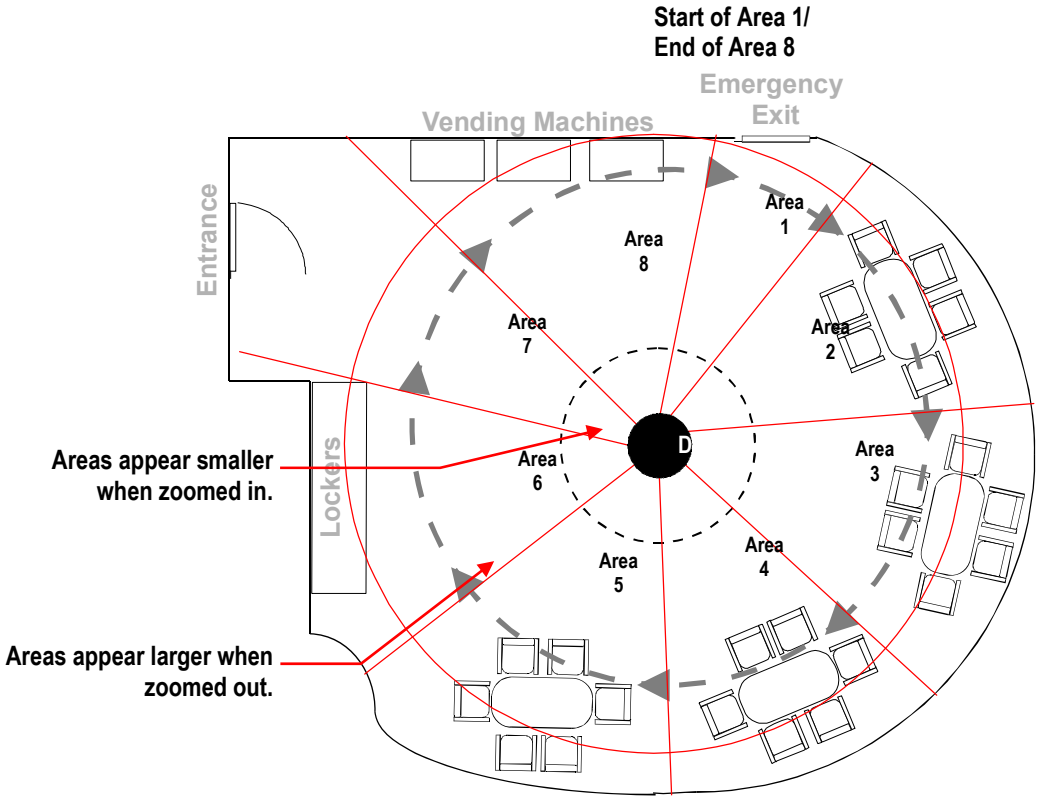
3. Point the dome to the new North position. When satisfied with the view, save the setting, or cancel the change.
4. The *Alarms/Areas/Home/Presets/PZ* screen appears. Select ***Exit***. The *Dome Configuration Menu* appears.

Programming Area Boundaries

If the dome is installed in a location where you can see numerous departments or other identifiable objects, you might want to consider programming area boundaries. ***Areas*** are programmed start- and end-points of a camera's field of view. Each area is a part of a circular viewing area that extends around the dome.

For example, Figure 33 represents the floor plan of a break room. The room includes a main entrance, tables with chairs, vending machines, lockers, and an emergency exit. Areas have been programmed around the fixtures in the room. As shown in this example, areas can be different sizes.

Figure 33. An example of areas found in a break room



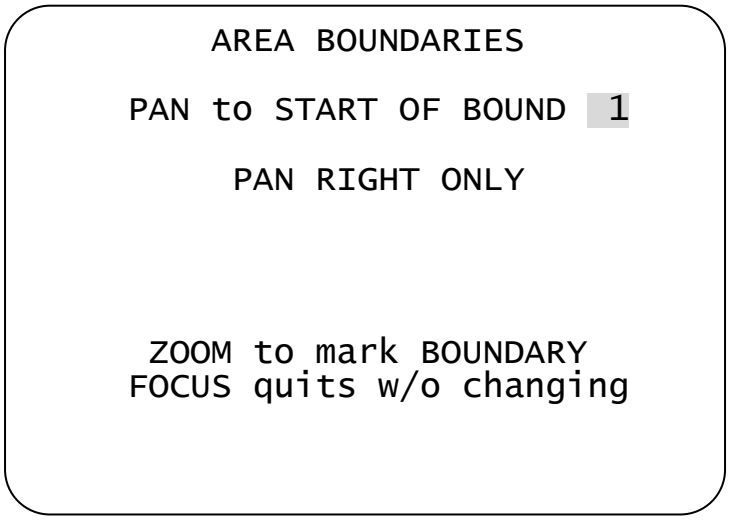
The ending point of one area is the starting point for the next area. The ending point of the last area cannot go past the starting point of the first area. In this example, the area that includes the vending machines cannot extend past the starting point of the area that includes the emergency exit. If your controller supports areas, these are separate from the areas you can program with the dome. You should not use both the controller and the configuration utility to define areas.

The zoom level also affects how large areas appear. When you zoom in to an area, the area may appear to be small. When you pan the dome, area boundaries may appear to be close. However, if you zoom out, the area appears to be larger. When you pan the dome, the area boundaries appear further apart. With this in mind, it will be easier to establish area boundaries if the zoom level is small than if the zoom level is large.

Note: When areas are programmed, each area is assigned a default name. Instructions for assigning new names appear in ***Chapter 5: Configuring Text Displayed On-Screen*** on page 71.

To program areas, select ***Area Boundaries*** from the *Alarms/Areas/Home/Presets/PZ* screen. The following screen appears:

Figure 34. Area Boundaries screen



If no boundary is set, pressing **Focus** quits without making any changes.

The dome supports from 2 to 16 areas.

I M P O R T A N T

If areas were previously programmed, you cannot restore the previously programmed boundaries by selecting ***Quit Without Saving*** from the *Dome Configuration Menu* once you begin making changes to the boundaries.

Setting Area Boundaries

1. Select ***Alarms/Areas/Home/Presets/PZ*** from the *Dome Configuration Menu*.
2. Move the highlight bar to ***Area Boundaries***, then select.

   The *Area Boundaries* screen appears.
3. Adjust the camera to the starting point of the first area, and press **Zoom** to mark the boundary.
4. Adjust the dome to the right until the ending point of the area is seen. If you attempt to move left, an error message appears. See the note on page 47 for information.
5. Mark the end-point of the area.

   The area number automatically advances.
6. Repeat steps 4 and 5 for each area you want to establish.

Note: You will receive an error message under the following conditions:

- If you attempt to program an area boundary that passes the starting point of the first area
- If you move the camera left after establishing the first boundary

Return to step 2 and start again.

7. When the last area boundary is set, save the changes. A message appears confirming that the areas have been successfully saved. Press **Focus** to continue.
8. When the *Alarms/Areas/Home/Presets/PZ* screen appears, select ***Exit***. The *Dome Configuration Menu* appears.

Establishing Privacy Zones

Privacy Zones are "masked" sections of the dome's viewing area. These masks prevent operators of the surveillance system who do not have access to the dome password from viewing these designated zones. Each zone has four sides, and the zones may overlap to form irregular shapes. The Privacy Zones move in relation to the dome pan/tilt position. In addition, the apparent size of the Privacy Zone adjusts automatically as the zoom level is adjusted. Up to eight Privacy Zones may be established for a dome.

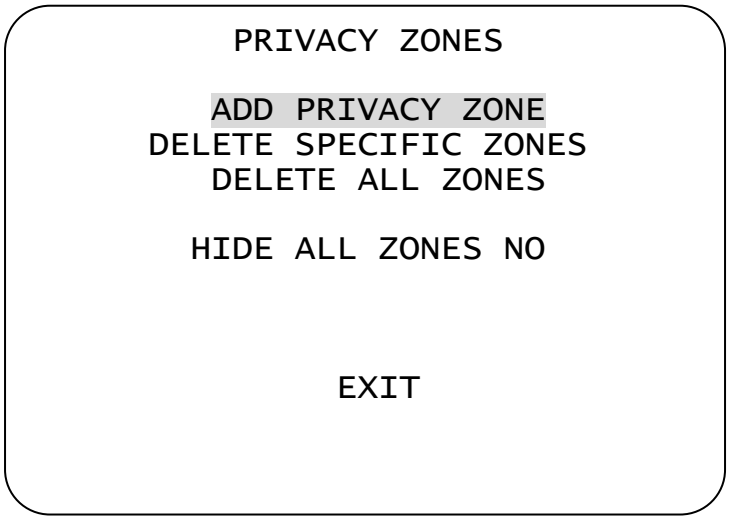
Privacy Zones are useful for high security areas. For example, you might establish a Privacy Zone around a safe's combination. However, you could view people approaching or opening the safe.

When Privacy Zones are active, the dome's firmware automatically disables text transparency. For additional information about text appearance, see ***Chapter 5: Configuring Text Displayed On-Screen*** on page 71.

In addition, the appearance of the configuration menus changes slightly when Privacy Zones are active. Both the first and last lines of the menus will appear in enlarged text when Privacy Zones are active. The menus change to one-sized text if Privacy Zones are hidden or deleted.

To program Privacy Zones, select ***Privacy Zones*** from the *Alarms/Areas/Home/Presets/PZ* screen. The following screen (Figure 35) appears:

Figure 35. Privacy Zones screen

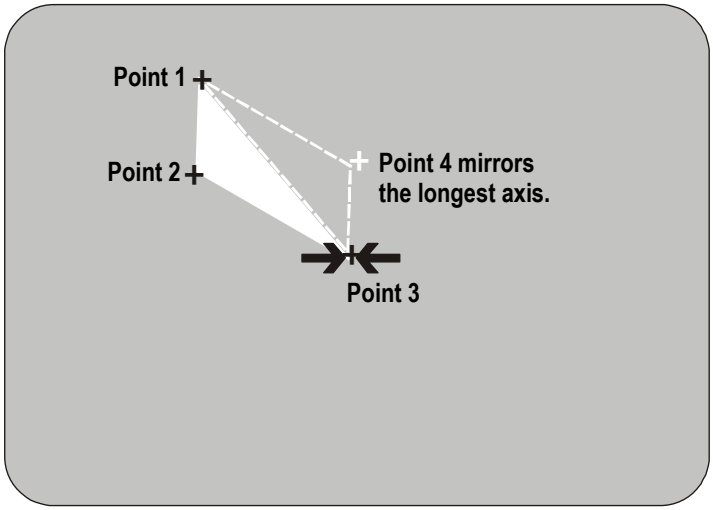


From this screen, you can program up to eight Privacy Zones, delete all or specific Privacy Zones, or temporarily hide all Privacy Zones.

How Privacy Zones are Programmed

Privacy Zones are established by selecting three points on the display image to mask. The fourth point on the Privacy Zone is automatically generated by mirroring the longest axis between the three selected points. Figure 36 illustrates how Privacy Zones are programmed.

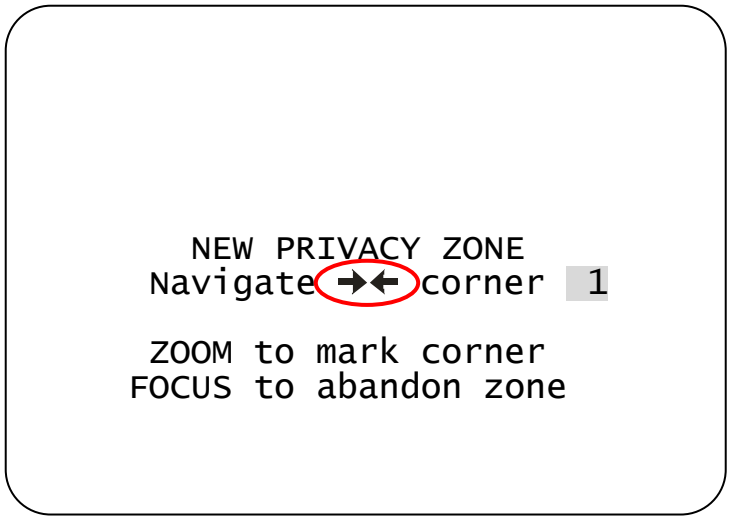
Figure 36. Privacy Zone programming example



The dome's firmware prevents you from establishing a zone that is too small or too large (greater than 90-degrees pan or tilt from the starting point).

Figure 37 illustrates the Privacy Zone programming screen:

Figure 37. Privacy Zone Programming screen



The circled arrows represent the target area on the screen for creating the Privacy Zone. Normally, this target area remains in the center of the screen. Using the **Pan/Tilt** control moves the target area by panning or tilting the dome. If the dome reaches its maximum tilt position, the Privacy Zone may still be established in the upper part of the display. When this occurs, the arrows move relative to the movement of the **Pan/Tilt** control until the top of the display area is reached.

The boundary points on the Privacy Zone are selected by pressing **Zoom**. Once a boundary point is selected, the arrows "blink" until the target area is moved to a valid area. Once the target moves to a valid area, the arrows stop blinking. If you move the target more than 90-degrees from a selected point, the arrows begin to blink again, indicating that the boundary is too large.

If you attempt to establish a boundary point while the arrows are blinking you will receive an error message: ***Zone is Too Small*** or ***Zone is Too Large***. If this happens, you must start programming from the beginning. Pressing **Focus Far** returns you to the Privacy Zone programming screen.

If you attempt to program more than eight Privacy Zones, the following message appears:

Maximum Allowed Number of Zones Defined

Pressing **Focus Far** returns to the *Program Privacy Zones* screen. To program a new zone, you must delete at least one of the eight existing Privacy Zones. See ***Removing or Hiding Privacy Zones*** on page 50.

IMPORTANT

Areas of the Privacy Zone may be exposed during rapid pan / tilt movements of the dome. To compensate for this limitation, you may want to program the Privacy Zone to be 20 to 25% larger than the area you want to mask.

Programming Privacy Zones

1. Select ***Alarms/Areas/Home/Presets/PZ*** from the *Dome Configuration Menu*.
2. Select ***Privacy Zones***.
3. The Program Privacy Zones screen appears. Select ***Add Privacy Zone***.
4. Use the **Pan/Tilt** control to position the arrows over the boundary point. Press **Zoom** to create.
5. Repeat step 4 to create boundary points 2 and 3.

> **Tip:** Remember, if the arrows are blinking, you are not in a valid target area. Only select a point if the arrows are not blinking.

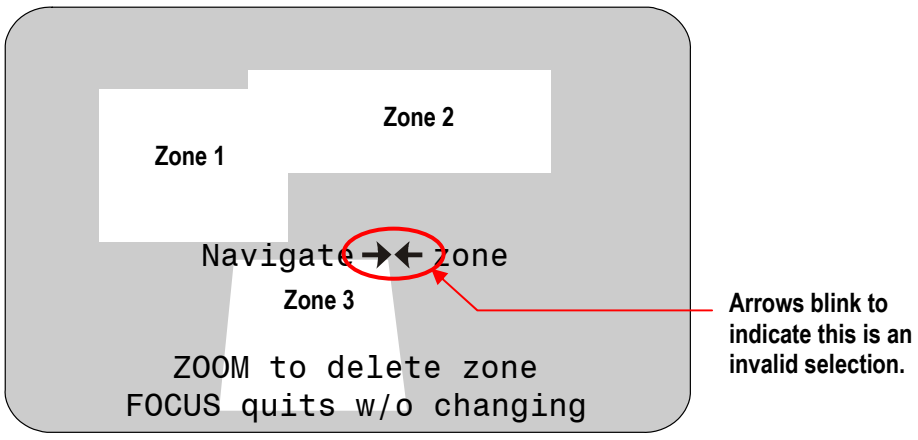
6. After the third boundary point is created, the fourth boundary point is automatically calculated. The new Privacy Zone appears on the screen. To program additional Privacy Zones, repeat steps 3 through 5. When finished, continue with step 7.
7. Select ***Exit*** to return to *Alarms/Areas/Home/Presets/PZ* screen.
8. When the *Alarms/Areas/Home/Presets/PZ* screen appears, select ***Exit***. The *Dome Configuration Menu* appears.

Removing or Hiding Privacy Zones

If you make an error during programming or no longer require Privacy Zones, individual zones or all Privacy Zones may be deleted. To temporarily remove the Privacy Zones, you may disable their appearance by changing the ***Hide All Zones*** setting to ***Yes***.

To delete individual Privacy Zones, you must adjust the position of the arrows to the area of the screen where the zone is recognized by the firmware. If multiple Privacy Zones are close together or overlap, the arrows blink, indicating that the selection is not allowed. Figure 38 illustrates Privacy Zones that are close together.

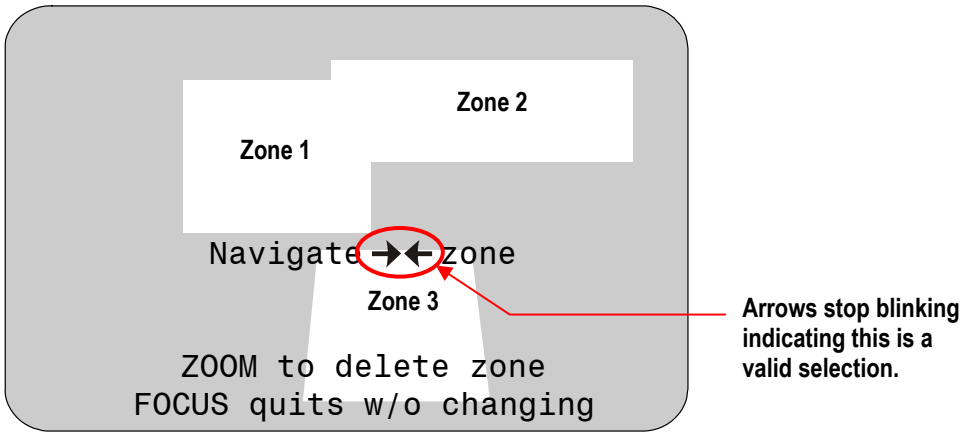
Figure 38. Deleting Privacy Zones – Invalid Selection



Three Privacy Zones are illustrated. Zones 1 and 2 are overlapping. Zone 1 and 3 are in close proximity. In this situation, the arrows blink because the target area is the same distance from all three zones.

To ensure that the correct Privacy Zone is deleted, place the arrows clearly in the zone you want to delete. Figure 39 illustrates a valid selection.

Figure 39. Deleting Privacy Zone – Valid Selection



By moving to the left, the arrows stop blinking when the target area enters Zone 1. Pressing **Zoom** allows you to delete Zone 1. If you do not want to delete the zone, press **Focus**

Note: Once you delete a zone, pressing **Focus** saves and exits the ***Delete Privacy Zones*** screen.

Deleting Specific Privacy Zones

To delete individual Privacy Zones, use the following procedure. To delete all Privacy Zones, see ***Deleting All Privacy Zones***.

1. Select ***Alarms/Areas/Home/Presets/PZ*** from the *Dome Configuration Menu*.
2. Select ***Privacy Zones***.

   The *Program Privacy Zones* screen displays.
3. Select ***Delete Specific Zones***.
4. Position the arrows in the Privacy Zone that you want to delete. Press **Zoom** to delete. If you do not want to delete the zone, press **Focus**.
5. Repeat steps 3 and 4 for each Privacy Zone you want to delete. When finished, select ***Exit***.
6. When the *Alarms/Areas/Home/Presets/PZ* screen appears, select ***Exit***. The *Dome Configuration Menu* appears.

Deleting All Privacy Zones

To delete all Privacy Zones, use the following procedure. To delete individual Privacy Zones, see ***Deleting Specific Privacy Zones***.

1. Select ***Alarms/Areas/Home/Presets/PZ*** from the *Dome Configuration Menu*.
2. Select ***Privacy Zones***. The *Program Privacy Zones* screen displays.
3. Select ***Delete All Zones***.

4. The following prompt appears:

YOU ARE ABOUT TO DELETE
ALL PRIVACY ZONES

CANCEL
CONTINUE

5. To delete all Privacy Zones, select ***Continue***.

   If you do not want to delete all Privacy Zones, select ***Cancel***. The *Program Privacy Zones* screen displays.

6. Select ***Exit*** to return to *Alarms/Areas/Home/Presets/PZ* screen.
7. When the *Alarms/Areas/Home/Presets/PZ* screen appears, select ***Exit***. The *Dome Configuration Menu* appears.

Hiding Privacy Zones

If you want to temporarily disable the appearance of Privacy Zones, you may "hide" them. This allows you to keep the Privacy Zones that have been programmed while disabling their appearance on-screen.

To hide all Privacy Zones:

1. Select ***Alarms/Areas/Home/Presets/PZ*** from the *Dome Configuration Menu*.
2. Select ***Privacy Zones.***

   The *Program Privacy Zones* screen displays.

3. Select ***Hide All Zones***. Change the setting.
   - Select ***Yes*** to hide all Privacy Zones.
   - Select ***No*** to make all Privacy Zones active.

     The default setting is No.

4. Select ***Exit*** to return to *Alarms/Areas/Home/Presets/PZ* screen.
5. When the *Alarms/Areas/Home/Presets/PZ* screen appears, select ***Exit***. The *Dome Configuration Menu* appears.

Programming Sequences

A *Sequence* is a sequential display of multiple camera Presets. Sequences provide a methodical and effective way to monitor multiple areas of interest by switching to different Presets automatically. Sequences are programmed from the *Select Preset to Program* screen.

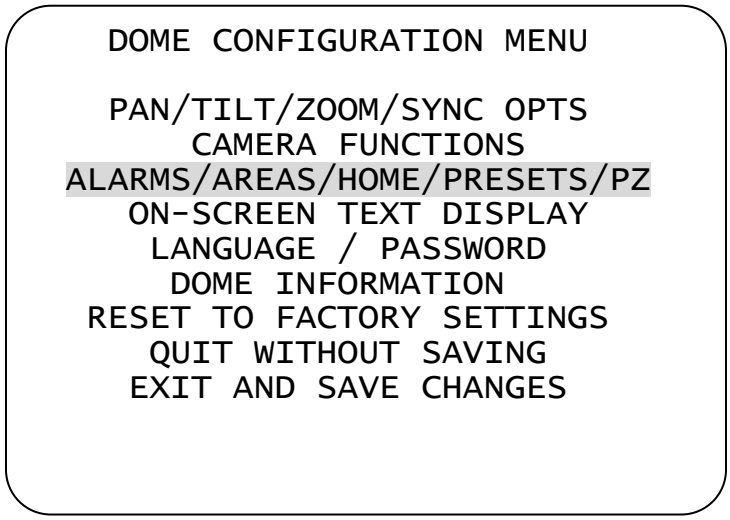
Sequences are created by identifying Preset views to include in the Sequence and specifying a dwell time that controls how long each Preset remains on-screen before switching to another Preset. Up to 16 Sequences can be created, each with 16 steps (Presets).

Steps to Programming Sequences

Follow the steps below to program Sequences.

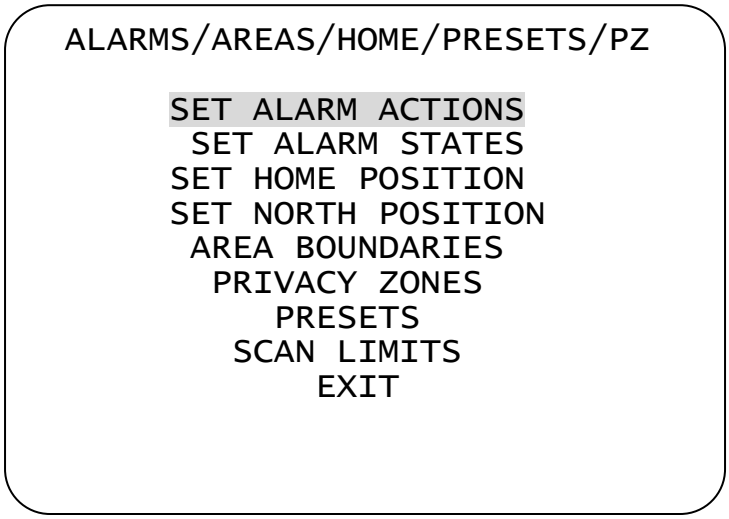
1. Access the *Dome Configuration Menu* (Figure 40) by pressing **Iris Open**, **Focus Far**, and **Zoom Out** on your controller.

Figure 40. Dome Configuration Menu screen



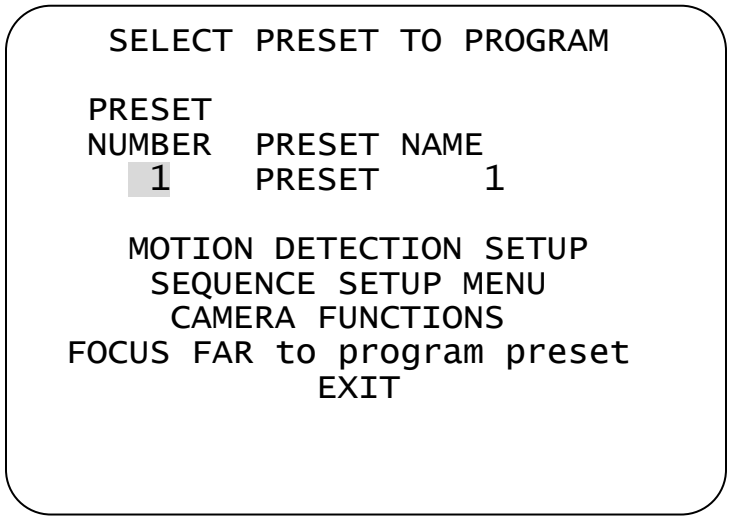
2. Highlight ***Alarms / Areas / Home / Presets / PZ*** and press **Focus Far** to select. The *Alarms/Areas/Home/Presets/PZ* screen appears.

Figure 41. Alarms/Areas/Home/Presets/PZ screen



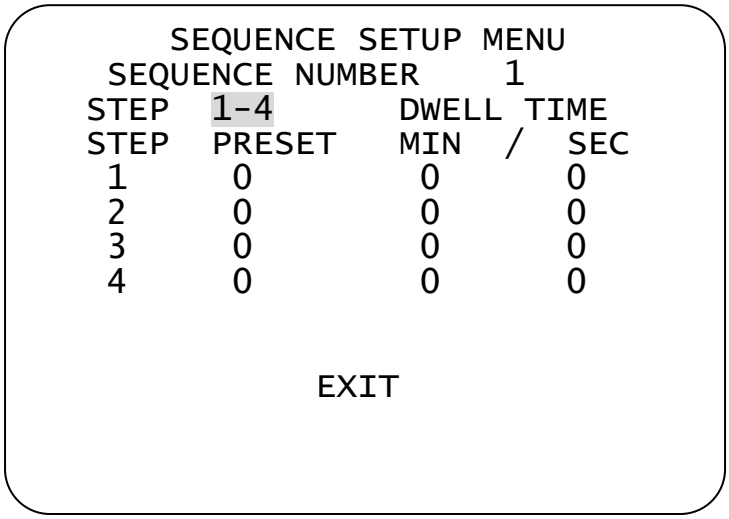
3. Highlight ***Presets*** and press **Focus Far**. The *Select Preset To Program* screen (Figure 42) appears.

Figure 42. Select Preset to Program screen



4. Highlight ***Sequence Setup Menu*** and press **Focus Far**. The *Sequence Setup Menu* screen appears.

Figure 43. Sequence Setup Menu screen



5. Highlight the ***Sequence Number*** field. Press **Zoom In/Out** to change values (1-16).
6. Highlight the ***Step*** field. Press **Zoom In/Out** to scroll through available steps. Steps are displayed in groups of 1-4, 5-8, 9-12, and 13-16.
7. Highlight the ***Preset*** field and press **Zoom In/Out** until the desired Preset number appears (1-96).
8. Highlight the ***Dwell Time Min*** field and press **Zoom In/Out** until the number of minutes you want the Preset to remain on-screen appears (0-10 minutes).
9. Highlight the ***Dwell Time Sec*** field and press **Zoom In/Out** until the number of seconds you want the Preset to remain on-screen appears (0-60 seconds in 10-second increments).

10. Repeat steps 7 through 9 above until the first 4 presets have been programmed. If more Presets are desired, highlight the ***Step*** field and use **Zoom In/Out** to display sequence steps 5-8.

11. When finished, highlight ***Exit*** and press **Focus Far** to select.

12. At the *Dome Configuration Menu* screen, highlight ***Exit and Save Changes*** and press **Focus Far** to save.

Running Sequences 1-16

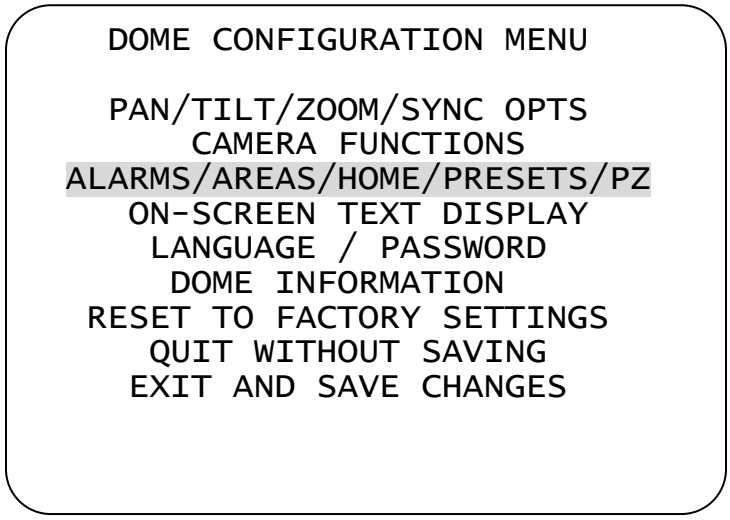
Two options are available for running Sequences:

- Option 1 – If your keyboard supports the DirectSet command, you can use it to run a Sequence immediately (see ***Accessing the DirectSet Menu*** on page 12). Consult your keyboard manual for information on DirectSet functions.
- Option 2 - Use the Set Home Position method to schedule one Sequence to run when the dome returns to its home position (after a defined period of inactivity).

Follow the steps below to run Sequences from the Set Home Position screen:

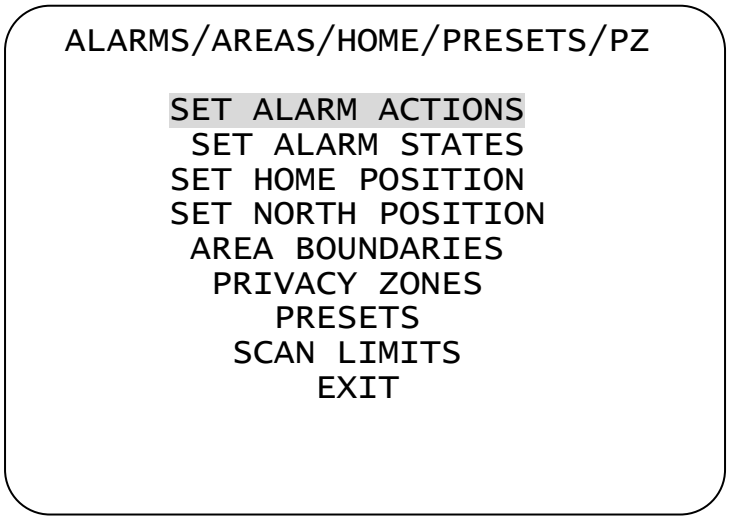
1. Access the *Dome Configuration Menu* (Figure 44) by pressing **Iris Open**, **Focus Far**, and **Zoom Out** on your controller.

Figure 44. Dome Configuration Menu screen



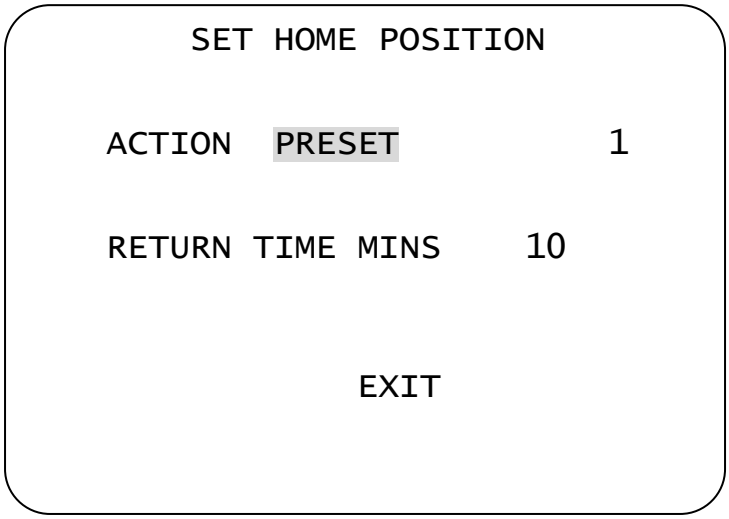
2. Highlight ***Alarms / Areas / Home / Presets / PZ*** and press **Focus Far** to select. The *Alarms/Areas/Home/Presets/PZ* screen (Figure 45) appears.

Figure 45. Alarms/Areas/Home/Presets/PZ screen



3. Highlight ***Set Home Position*** and press **Focus Far**. The *Set Home Position* screen appears.

Figure 46. Set Home Position screen



4. On the highlighted ***Action*** field, press **Zoom In/Out** until Sequence appears.
5. Highlight the number field. Press **Zoom In/Out** until your desired Sequence number appears.
6. Highlight the ***Return Time Mins*** field. Press **Zoom In/Out** to specify when the dome is to return to its home position after a period of inactivity (1-60 min.). This triggers the Sequence to run.
7. Highlight the ***Exit*** field and press **Focus Far** to select.
8. Continue to exit until the completely out of all programming menus.

Note: If a Preset or a Pattern is called by an alarm while a Sequence is running, the Sequence will be interrupted.

Pattern Options—Fixed or Variable Speed

A *Pattern* is a series of programmed pan/tilt/zoom dome movements. The SpeedDome Ultra 8 camera dome allows you to create fixed speed or variable speed Patterns (variable speed Patterns are dependent on system capability).

The camera dome provides three options when configuring the system for Patterns:

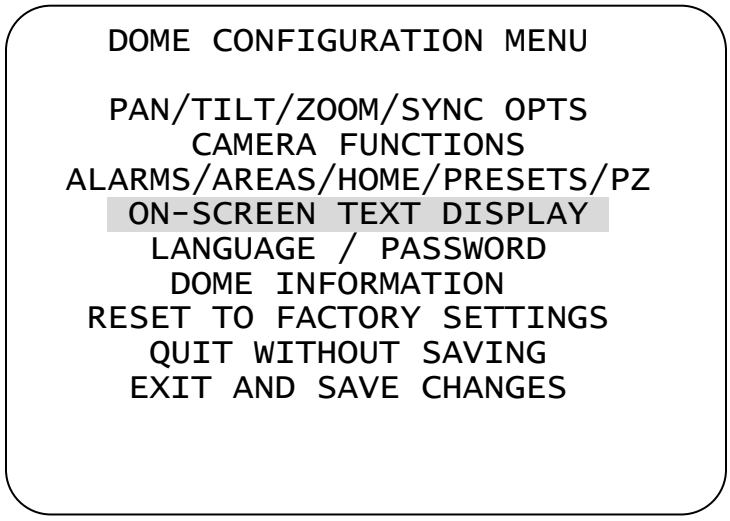
Table 6. Pattern configuration options

Setting	Description
Off	Allows programming of three *fixed* speed Patterns. The three Patterns are limited to a total of 99 pan/tilt/zoom movements (e.g., if one Pattern uses 50 movements, the remaining two Patterns are limited to a total of 49 movements). Note: The VM1 and VM96 systems only support the OFF setting.
3	Allows programming of three *variable* speed Patterns. Each Pattern can have up to 99 pan/tilt/zoom movements.
16	Allows programming of 16 *variable* speed Patterns. Each Pattern can have up to 99 pan/tilt/zoom movements.

Use the following steps to configure the dome for Patterns:

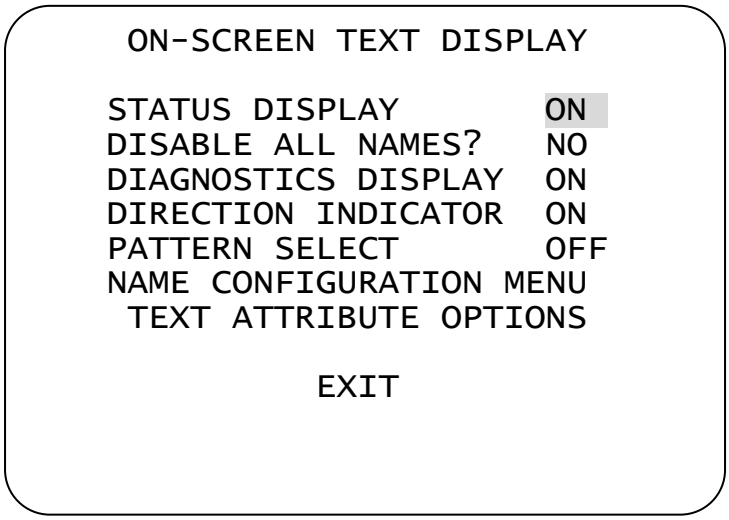
1. Enter the *Dome Configuration Menu* by pressing **Iris Open**, **Focus Far,** and **Zoom Out** on your controller.

Figure 47. Dome Configuration Menu screen



2. Highlight ***On-Screen Text Display*** and press **Focus Far** to select. The *On-Screen Text Display* screen appears.

Figure 48. On-Screen Text Display screen



3. Highlight the ***Pattern Select*** field and press **Zoom In/Out** to select OFF, 3, or 16.
4. Highlight ***Exit*** and press **Focus Far** to select. The *Dome Configuration Menu* appears.
5. Highlight ***Exit and Save Changes*** and press **Focus Far** to save.

Recording Patterns When Configured for 16

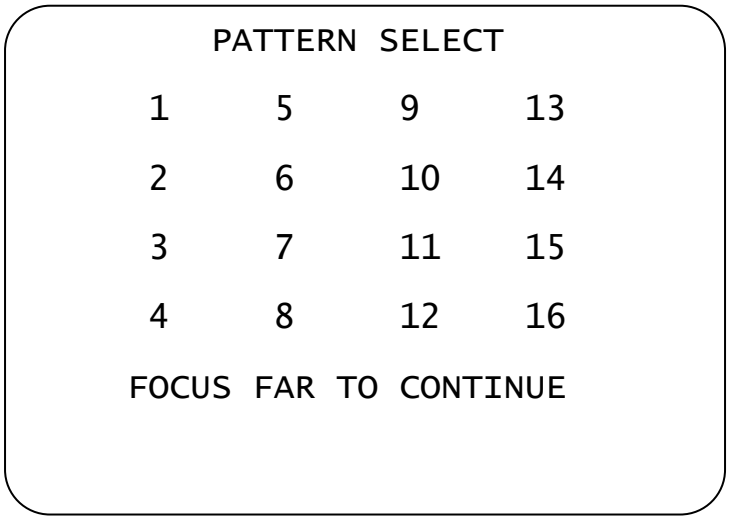
Recording Patterns when the ***Pattern Select*** field is set for ***OFF, 3***, or ***16*** is accomplished through keyboard commands (consult your keyboard user guide). However, additional steps are required when the ***Pattern Select*** field is set for ***16***.

Note: If the controller being used supports the use of 16 Patterns, the **16 Pattern Feature** will execute patterns 1–16 automatically.

Follow the steps below to record 16 variable-speed Patterns:

1. Enter the appropriate keyboard commands to record a Pattern, using 1, 2, or 3 as your Pattern number (consult your keyboard user guide for specific steps.). The *Pattern Select* screen (Figure 49) appears.

Figure 49. Pattern Select screen



2. Highlight a desired Pattern number (1-16). Press **Focus Far** to continue.
3. Pan/tilt/zoom the dome as desired for the Pattern.
4. Execute the keyboard's Pattern save command to save the Pattern.

Running 16 Patterns

When a dome is configured for 16 Patterns, running a Pattern requires displaying the *Pattern Select* screen (Figure 49). Follow the steps below to run a Pattern.

1. Enter the appropriate keyboard command to run Patterns 1, 2, or 3. The *Pattern Select* screen appears.
2. Highlight the desired Pattern number (1-16) to run.
3. Press **Focus Far** to select. The *Pattern Select* screen disappears and the Pattern runs.

Note: If the controller being used supports the use of 16 Patterns, the **16 Pattern Feature** will execute patterns 1-16 automatically.

Changing Camera Functions and Motion Detection Setup within Presets

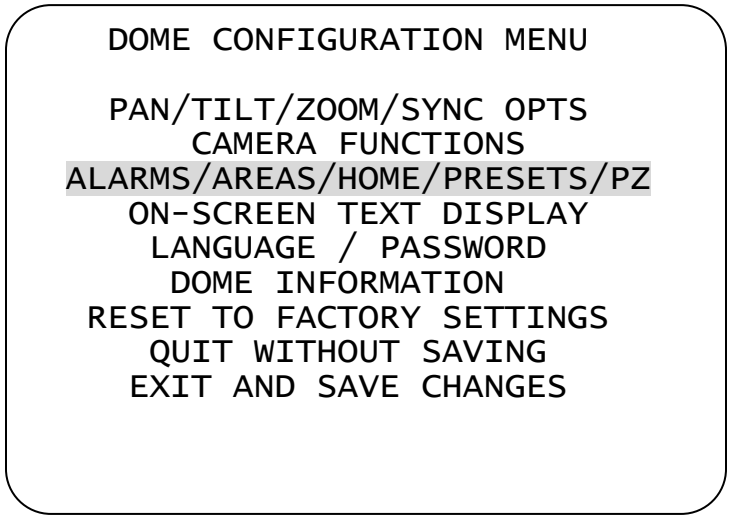
When Presets are created, they adopt the dome parameters defined in the *Camera Functions* screen and/or the *Motion Detection* screen. You can now customize camera functions for each Preset by accessing the *Camera Functions* screen, or you can set up motion detection by accessing the *Motion Detection Setup* screen from the *Presets* screen.

Note: If you change the parameters in the *Camera Functions* menu and/or change the motion detection setup for an existing Preset, you will need to reprogram the Preset to save the changes.

Follow the steps below to change camera functions and/or motion detection within Presets:

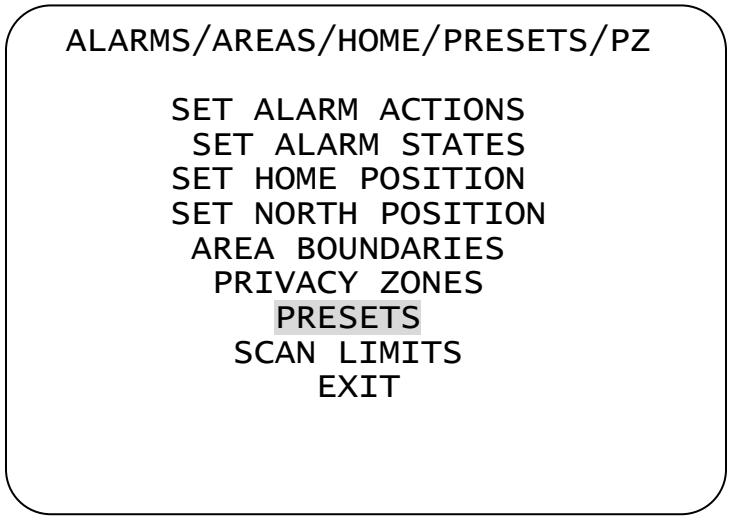
1. Access the *Dome Configuration Menu* (Figure 50) by pressing **Iris Open**, **Focus Far**, and **Zoom Out** on your controller.

Figure 50. Dome Configuration Menu screen



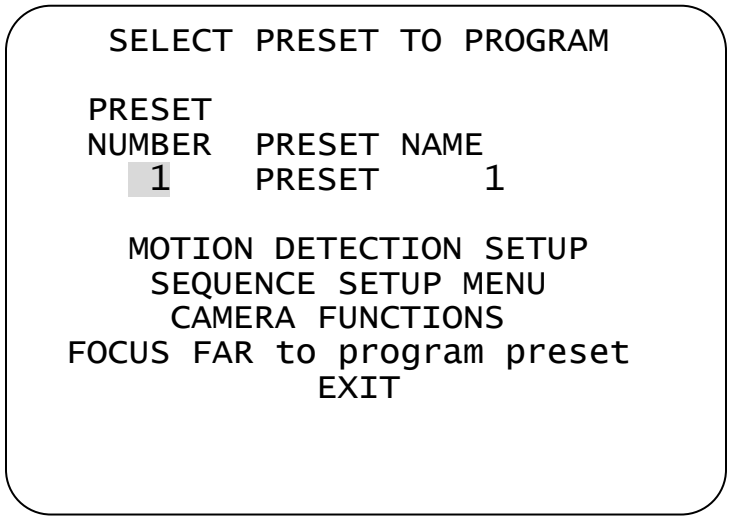
2. Highlight ***Alarms / Areas / Home / Presets / PZ*** and press **Focus Far** to select. The *Alarms / Areas / Home / Presets / PZ* screen appears.

Figure 51. Alarms/Areas/Home/Presets/PZ screen



3. Highlight ***Presets*** and press **Focus Far** to select. The *Select Preset To Program* screen appears (Figure 52).

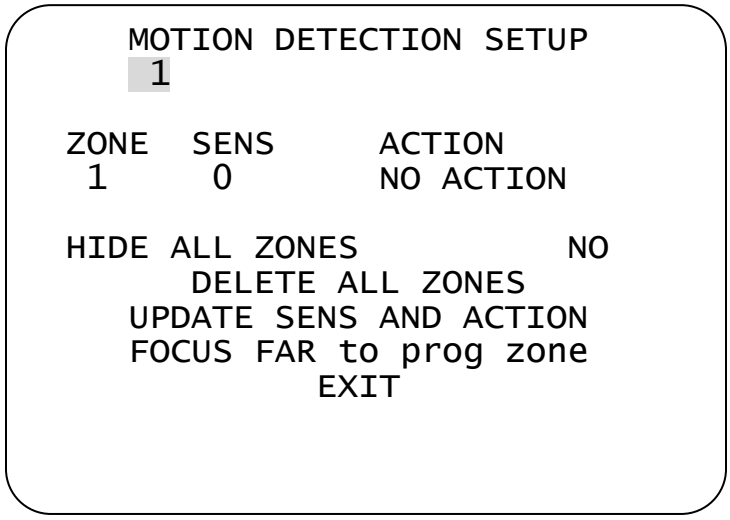
Figure 52. Select Preset to Program screen



4. Highlight the ***Preset Number*** field, and press **Zoom In/Out** until your desired Preset number appears.

5. To set up motion detection, highlight ***Motion Detection Setup***, and press **Focus Far**. The *Motion Detection Setup* screen appears (Figure 53). If motion detection is not required for the preset, skip to step 12.

Figure 53. Motion Detection Setup screen



6. The **Preset** number field is highlighted. Press **Zoom In/Out** until the Preset number you want to use for this motion detection setup (1-96) appears.

7. Use the joystick to highlight the **Zone** field. Press the **Zoom In/Out** button until the zone number (1-8) you want to apply to the Preset appears.

8. Highlight the **Sens** field. Press the **Zoom In/Out** button until the sensitivity level you want to apply to your zone appears.

Note: Zone sensitivity ranges from zero (no sensitivity) to five (high sensitivity). Zero is used to disable individual zones on a temporary basis.

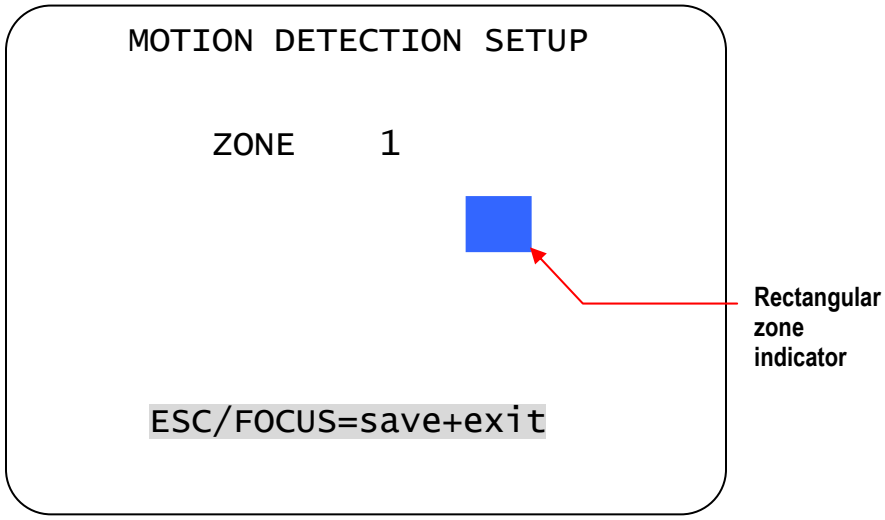
9. Highlight the **Action** field. Press the **Zoom In/Out** button until the action you want appears. Action determines how the system will respond when motion is detected. Choices are:

   - **No Action*** – no action occurs
   - **Preset** (1-96) – calls a Preset
   - **Pattern** (1-16) – runs a Pattern
   - **Output** (1-4) – activates an output.

   * When No Action is programmed on the *Motion Detection Setup* screen, the dome's return to a Home position is delayed as long as motion occurs within the time specified on the return-to-home screen.

10. Press **Focus Far**. The *Active Zone Position Programming* screen appears (Figure 54).

Figure 54. Active zone position programming screen (35X camera dome)



11. Using the joystick, move the rectangular zone indicator to a desired location, and then press **Focus Far** to save and exit.

Note: The rectangular zone indicator appears on-screen when the joystick is moved.

12. Repeat steps 6 through 11 to create additional detection zones (1-8).

    When the *Motion Detection Setup* screen appears, highlight ***Exit*** and press **Focus In/Out** to save the setting. Motion detection works in conjunction with existing Presets.

To begin monitoring motion detection, call the Preset to which motion detection has been applied.

Note: Motion detection is not guaranteed to capture 100% of all activity. Motion detection can be hidden without erasing the motion detection configuration (for example, during the day when motion is expected). To hide motion detection, select **Yes** on the **Hide All Zones** field on the *Motion Detection Setup* screen (Figure 53 on page 61).

13. To change a camera function, highlight **Camera Functions** and press **Focus Far**. One of the following *Camera Functions* screens will appear.

Figure 55. Camera Functions screen (35X camera dome)

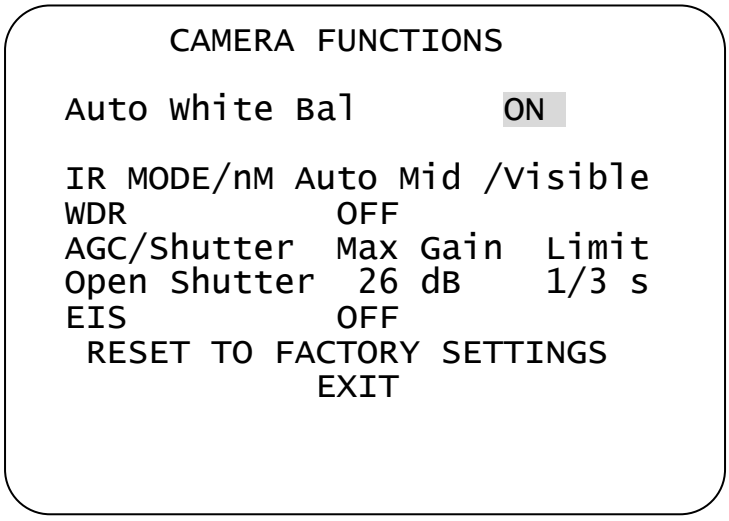
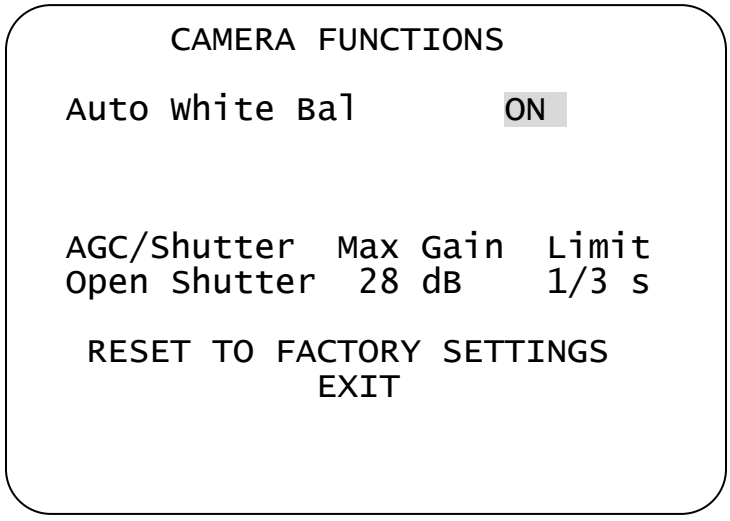


Figure 56. Camera Functions screen (22X camera dome)



14. Make your desired changes.

15. Highlight ***Exit*** and press the **Focus Far** button to select. The *Select Preset to Program* screen appears.

16. Program (or reprogram) the Preset by selecting **Focus Far** to program a preset.

Note: If you change the parameters in the *Camera Functions* menu or change *Motion Detection Setup* for an existing Preset, you will need to reprogram the Preset to save the changes.

Establishing Scan Limits

Scan limits can be defined in the *Dome Configuration Menu*. The three types of scan can only be activated from the *Home Position* function or from a controller that supports the DirectSet menu function. The DirectSet menu is not available for domes used with Manchester protocol.

Once these scan limits are programmed you can choose to run a smooth scan, stepped scan, or random scan. When active, the scan repeats until interrupted by a camera command, preset, pattern, or alarm.

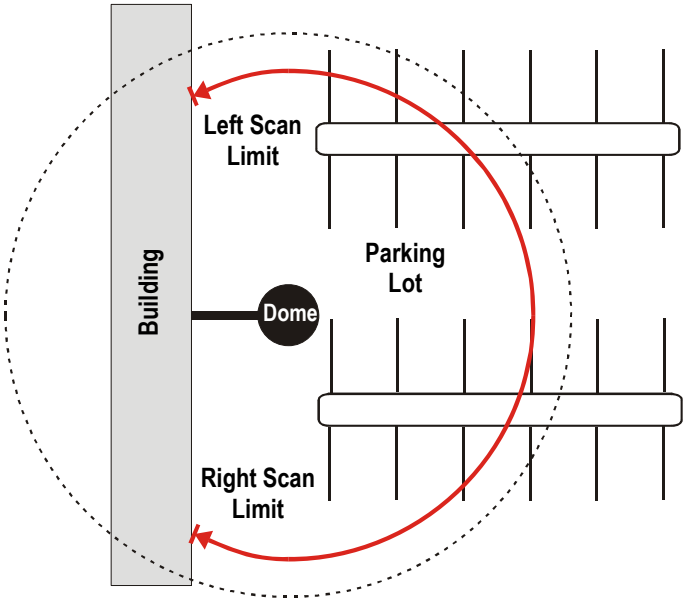
Understanding Scan Limits

Scan Limits are two points around the pan axis that define a surveillance area. When a scan is activated, the dome pans between the two surveillance points— the left and right scan limits. This helps to ensure that only useful video is being monitored during the scan.

For example, a dome is mounted off the edge of a building to monitor a parking lot. Part of the observable area in this situation is a wall. By setting left and right scan limits to exclude the wall, only the viewable area of the parking lot is monitored when a scan is active.

Figure 57 illustrates the scan limits. The dashed circle represents the domes field of view. The solid line curve represents the scan area. By setting left and right scan limits where the building's wall becomes visible, you ensure that only useful video of the parking lot is being observed when the scan is active.

Figure 57. Left and Right Scan Limits



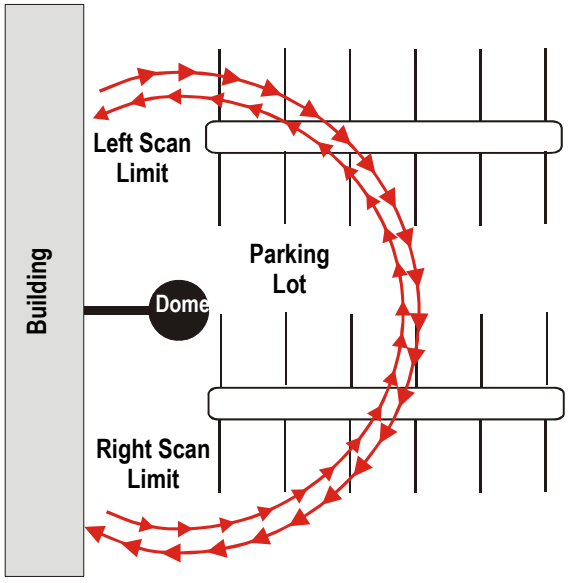
Scan Types

Three types of scans may be activated: smooth scan, stepped scan, and random scan.

A ***smooth scan*** slowly pans between the left and right scan limits, starting at the left scan limit. When the right scan limit is reached, the scan reverses. Figure 57 illustrates the smooth scan.

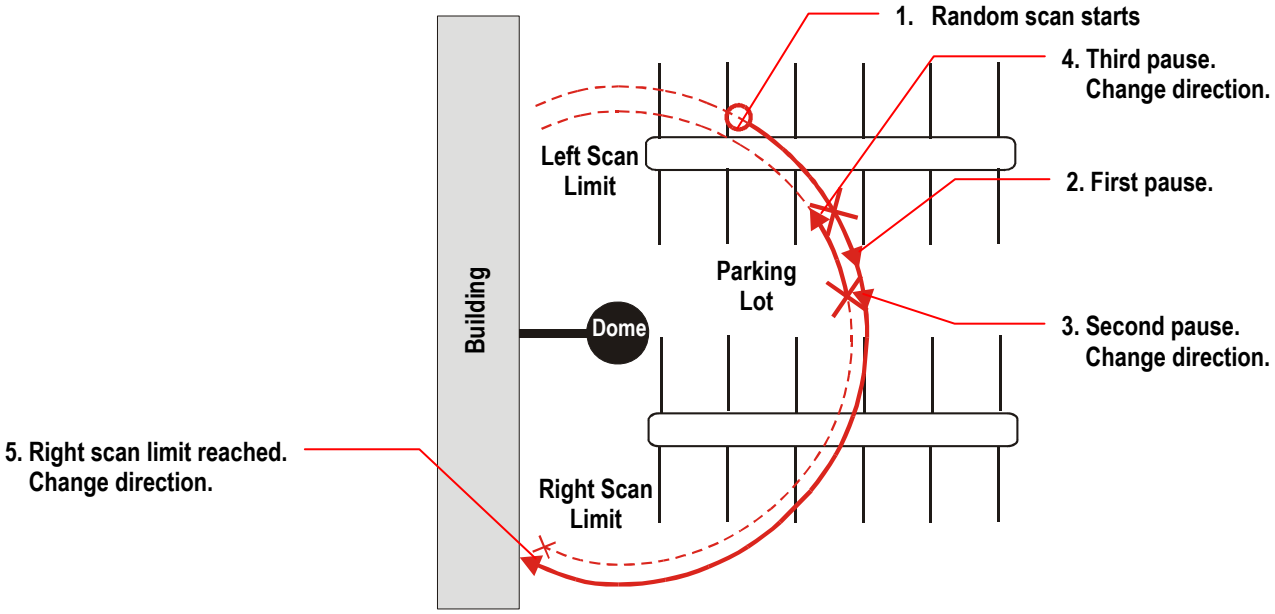
A ***stepped scan*** pans slowly, pausing briefly every 10° between the left and right scan limits. Once the right scan limit is reached, the scan reverses. Figure 58 illustrates the stepped scan. Each arrowhead represents a 10° step in the scan.

Figure 58. Stepped Scan



A ***random scan*** pans randomly between the left and right scan limits. For example, the scan may start at point in the scan, then pan right 40° and pause, pan right 10° and pause, pan left 20° and pause, and pan right until it reaches the right scan limit. Figure 59 illustrates a random scan. In this figure, the dashed line represents the scan area, and the solid line represents the scan pattern. The circle on the scan represents the start point. Each arrowhead represents a pause. "X" represents a change in direction.

Figure 59. Random Scan



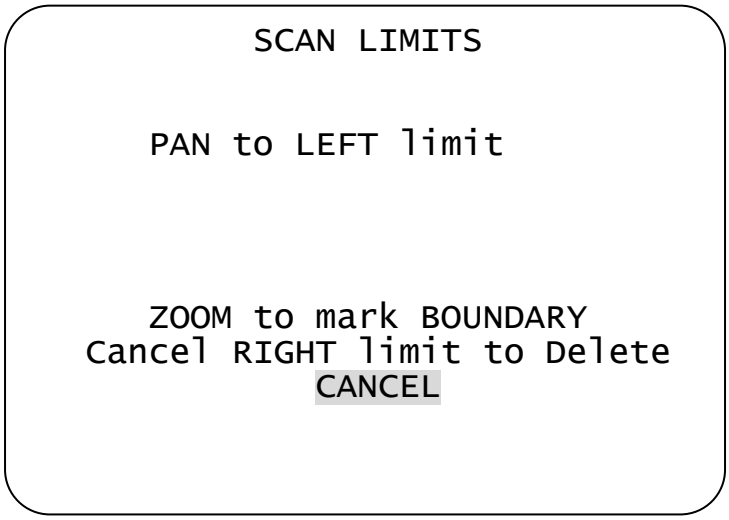
Programming Scan Limits

Note: For all types of scans, the current camera tilt and zoom settings are used when the scan is activated. Any changes of tilt or zoom during the programming of the scan limits are ignored.

1. Select ***Alarms/Areas/Home/Presets/PZ*** from the *Dome Configuration Menu*.
2. Select ***Scan Limits***.

The *Scan Limits* screen appears.

Figure 60. Scan Limits screen



Note: Press **Focus** during steps 3 or 4 to cancel scan limit programming.

3. Adjust the pan position of the dome to set the ***left scan limit.*** Press **Zoom** to select.
4. Pan the dome **to the right** to set the ***right scan limit***. Press **Zoom** to select.
5. When the *Alarms/Areas/Home/Presets/PZ* screen appears, select ***Exit***. The *Dome Configuration Menu* appears.

AD Up-the-Coax Protocol

The AD Up-the-Coax (AD-UTC) protocol is a new protocol developed by American Dynamics. It provides video and two-way dome control signals on a single cable for compatible American Dynamics switchers and keyboards.

Note: At the time of publication, the following American Dynamics keyboards are compatible with AD-UTC protocol: ADCC0200 and ADCC0300. The commands provided in this document assume that one of these keyboards is being used. Contact your Sales or Technical Support Representative for current information.

AD-UTC Command Summary

Table 7 lists the commands to operate the configuration utility in AD-UTC environment. The keyboard must be in programming mode to perform these functions.

Table 7. AD-UTC commands summary

Command	Function
F, ⇧ + ☰ (Function, and then Shift+Menu)	Start the configuration utility.
Joystick (Pan/Tilt)	Move the highlight bar on the active menu.
(Focus Far) **Or** (Focus Near)	Select the highlighted item on the active menu.
(Zoom In) or Twist joystick clockwise	Increase the value of the selected setting. Display the next choice for the setting.
(Zoom Out) or Twist joystick counterclockwise	Decrease the value of the selected setting. Display the previous choice for the setting.
F, ⇧ + ☰ (Function, and then Shift+Clear)	Save changes and exit the utility from any screen.

When setting names or entering password information, the screen displays the available characters in the selected language. Table 8 provides the name programming and password entry commands:

Table 8. Name Programming/Password Entry Commands

Command	Function
Joystick Left/Right	Move the highlight left or right in the character field.
Joystick Up/Down	Move the highlight up or down in the character field.
(Focus Far) **Or** (Focus Near)	Select the highlighted character in the character field.
(Zoom In) or Twist joystick clockwise	Move the cursor to the right of the current character in the name or password.
(Zoom Out) or Twist joystick counterclockwise	Move the cursor to the left of the current character in the name.

Additional Dome Commands

Table 9 provides the special commands available when using the dome in an AD-UTC network. These commands are available when you enter the keyboard combination provided.

Table 9. Additional dome commands

Command	Function
F (Function), Preset # (1-96), and then (Preset)	Program selected Preset
Preset # (1-96), and then (Preset)	Recall selected Preset
F (Function), pattern # (1-3), and then + (Shift+Preset)	(Ver. 0.20 keyboard only) Start selected Pattern programming
Pattern # (1-3), and then F (Function)	(Ver. 0.20 keyboard only) Save Pattern programming
Pattern # (1-3), and then + (Shift and Preset)	(Ver. 0.20 keyboard only) Run selected Pattern continuously
F (Function), pattern # (1-3), then (Pattern), move joystick as desired, enter Pattern number, and then F (Function)	(Ver. 1.0 keyboard only) Program a Pattern in RS-485 mode
F (Function), pattern # (1-3), then (Pattern), and then F (Function)	(Ver. 1.0 keyboard only) Delete a Pattern in RS-485 mode
F (Function), pattern # (1-3), then (Pattern), move joystick as desired, and then (Pattern)	(Ver. 1.0 keyboard only) Program a Pattern in RS-232 mode
F (Function), pattern # (1-3), then (Pattern), and then (Pattern)	(Ver. 1.0 keyboard only) Delete a Pattern in RS-232 mode
F + (Function+Focus Far) **Or** F + (Function+Focus Near)	Resume Auto Focus mode
F + (Function+Iris Open) **Or** F + (Function+Iris Close)	Resume Auto Iris mode
(Flip)	Rotate dome 180° from current position (“flip”)

Performance Notes

Keep the following considerations in mind when using the SpeedDome Ultra 8 camera dome in the AD-UTC environment:

Address Setting

The camera dome must be set to address 891 to operate in the AD-UTC environment. When the dome initializes or resets, the address and protocol information (UTC_T) appear on-screen.

Accessing the DirectSet Menu

The DirectSet Menu provides easy access to specific camera dome functions from the keyboard. To access the DirectSet menu, select the dome, and then press the DirectSet or Info button (varies by controller) to display the menu.

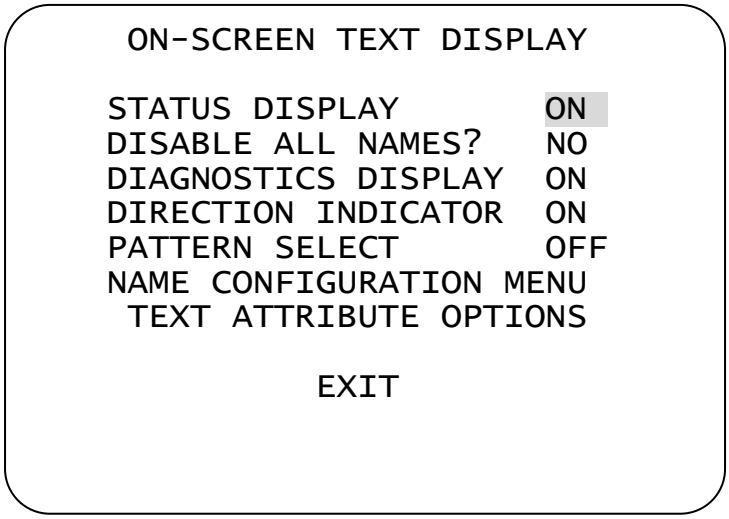
Refer to the ***Accessing the DirectSet Menu*** on page 12 for detailed information.

Chapter 5: Configuring Text Displayed On-Screen

This chapter describes how to modify settings related to text displayed by the dome. It includes settings for displaying *dome status information*, *names*, *diagnostics*, and *pointing direction*. It also provides instructions for *programming names* and configuring *text display options*.

When ***On-Screen Text Display*** is selected from the *Dome Configuration Menu*, the following screen appears:

Figure 61. On-Screen Text Display screen



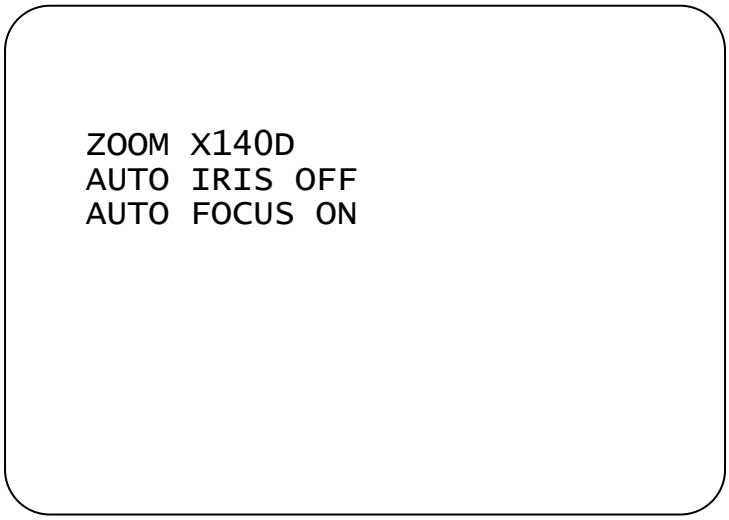
Use this screen to display dome status information, enable or disable the display of all name information, display diagnostic information after a dome reset, and display direction information about where the dome is pointing. You can also start the *Name Configuration Menu* and the *Text Attribute Options* screens.

- To change the settings, move the highlight bar to the appropriate field and make the changes.
- To return to the *Dome Configuration Menu*, select ***Exit***.

Displaying or Hiding Status Information

You can choose to display the status of the zoom setting, auto iris, and auto focus. This information appears in the upper left corner of the monitor (Figure 62). The information only appears when there is a change in the status of any item and remains on the screen for 5 seconds. If "D" appears next to the zoom factor, the digital zoom is active (zooms greater than 22X).

Figure 62. Example of Zoom, Auto Iris, and Auto Focus Status Information



Note: Displaying status information is separate from displaying name information. If the ***Disable All Names?*** setting is set to ***Yes***, the status information still appears if ***Status Display*** is set to ***On***.

Changing the Display of Status Information

1. Select ***On-Screen Text Display*** from the *Dome Configuration Menu*.

   The highlight bar appears on ***Status Display***.

2. Change the setting.

   - Select ***On*** to display dome status information on the monitor.
   - Select ***Off*** to prevent dome status information from appearing on the monitor.

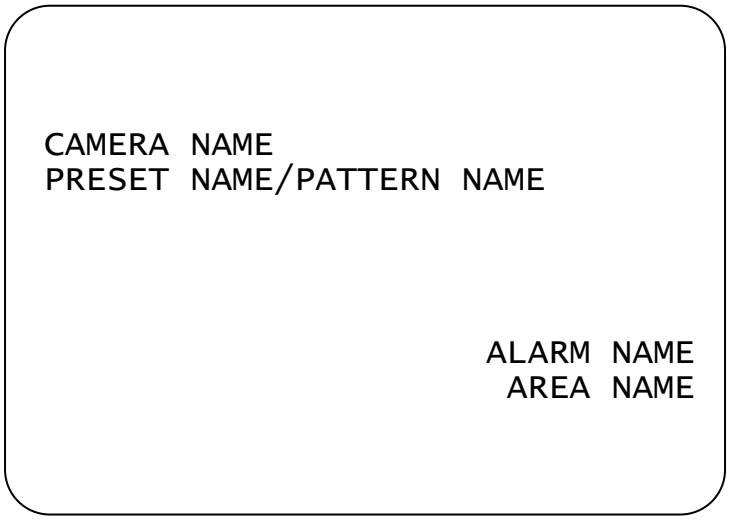
   The default setting is Off.

3. Select ***Exit***. The *Dome Configuration Menu* appears.

Displaying or Hiding All Name Information

The dome provides the ability to display the dome name, the area where the dome is pointing, the name of the preset or pattern that is running, and alarm names. When the display of camera or area names is enabled, the information appears on the screen continuously. Preset, pattern, and alarm names appear only while they are active.

Figure 63. Display Locations for Name Information



You can choose to disable displaying all name information, or you can choose to display selected or all name information.

Changing the Display of *All* Name Information

1. Select ***On-Screen Text Display*** from the *Dome Configuration Menu*.
2. Move the highlight to ***Disable All Names?***
3. Change the setting.
   - Select ***Yes*** to disable the appearance of all name information.
   - Select ***No*** to enable the appearance of all or some name information. Then continue with ***Configuring the Display of Name Information*** on page 76.

   The default setting is No.
4. Select ***Exit***. The *Dome Configuration Menu* appears.

Displaying Diagnostic Tests During Reset

You can choose to have dome diagnostic tests run whenever the dome resets. The diagnostic information displayed includes:

- Communications Loopback Test
- Camera Loopback Test
- Motor Circuit Test

If you do not want diagnostic information to appear when the dome resets, a screen displaying the firmware version numbers for the Boot and Application code and the maximum optical zoom for the dome appears.

IMPORTANT

Enabling diagnostic tests may cause a momentary loss of communication on the network when the dome diagnostics are executed.

Changing the Display of Diagnostic Information

1. Select ***On-Screen Text Display*** from the *Dome Configuration Menu*.
2. Move the highlight to ***Diagnostic Display***.
3. Change the setting.
   - If you want diagnostic tests to run when the dome resets, select ***On***.
   - If you do not want diagnostic tests to run when the dome resets, select ***Off***. This choice displays the firmware versions whenever the dome resets.

     The default setting is Off.
4. Select ***Exit***. The Dome Configuration Menu appears.

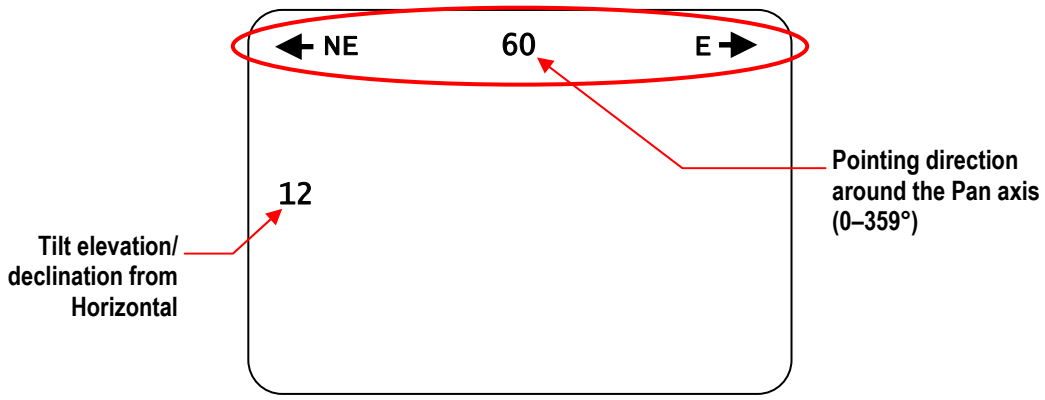
Displaying Direction Indicators

Direction Indicators let you know the approximate pointing direction of the dome in relation to an established point called "North". Directions for setting the North Position are covered in ***Chapter 4: Configuring Alarms, Areas, Home, Privacy Settings, Presets and Scan Limits***.

When enabled, the Direction Indicators appear along the top edge of the display. In addition, a tilt elevation indicator also appears along the left edge of the display. The value of the tilt elevation indicator is relative to the "virtual horizon" of 0° tilt. By default, the display of Direction Indicators is disabled.

Figure 64 illustrates the locations of the Direction Indicators on the display.

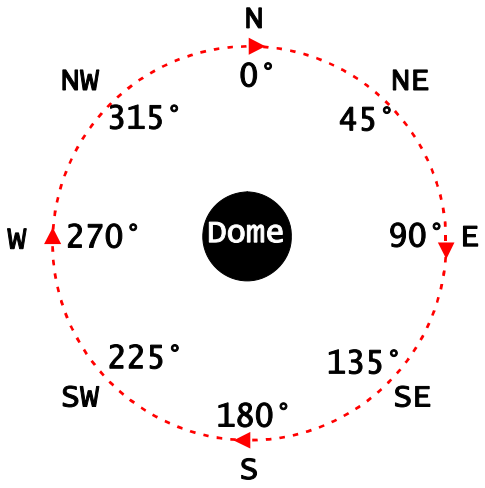
Figure 64. Screen locations for Direction Indicators



In this example, the current pointing position is 60° from North. The tilt elevation is 12° above the virtual horizon. Panning to the left points the dome towards the Northeast. Panning to the right points the dome towards the East. If you tilt below the virtual horizon, the negative values will be displayed along the left edge (for example, –25). The elevation values range from +25° to -90°.

If you pan to a position that corresponds to a well-known navigational heading, the label corresponding to the heading appears in the center position. Figure 65 illustrates the navigational headings and their corresponding degrees from North.

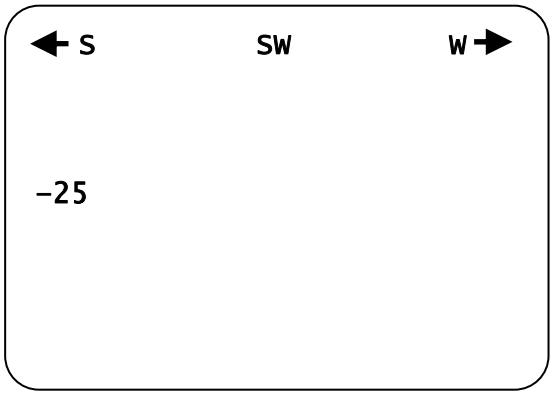
Figure 65. Navigational headings and corresponding degrees from North



In this illustration, the black circle in the center represents the dome, the dotted circle represents the pan axis, and the arrowheads represent panning the dome to the right.

Figure 66 represents pointing the dome precisely at 225° from North (Southwest) with a tilt of 25° below the virtual horizon. Panning to the left points the dome towards the South. Panning to the right points the dome towards the West.

Figure 66. Pointing the dome precisely southwest with a tilt elevation of –25°



Changing the Display of Direction Indicators

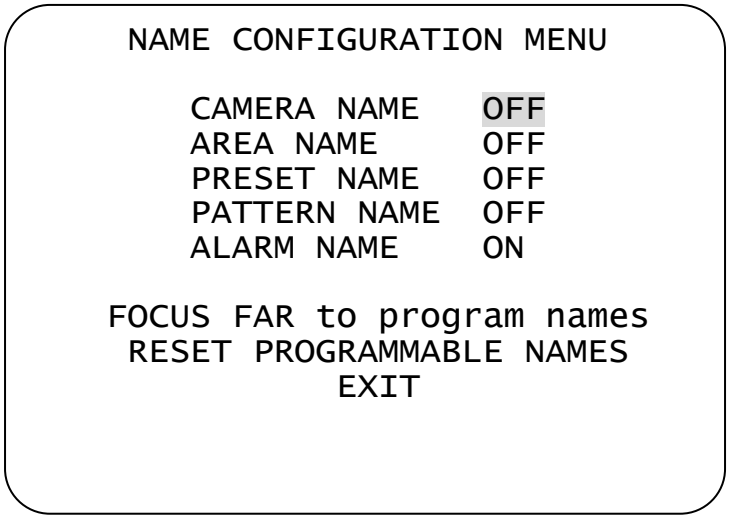
1. Select ***On-Screen Text Display*** from the *Dome Configuration Menu*.
2. Move the highlight to ***Direction Indicator***.
3. Change the setting.
   - Select ***On*** to display the direction information.
   - Select ***Off*** to prevent the direction information from displaying.

   The default setting is Off.
4. Select *Exit*. The *Dome Configuration Menu* appears.

Configuring the Display of Name Information

Use the *Name Configuration Menu* to select which name information appears on-screen. To display this screen, select ***Name Configuration Menu*** from the *On-Screen Text Display* screen. The following screen appears:

Figure 67. Name Configuration Menu



You can choose to enable or disable the display of camera, area, preset, pattern, and alarm names from this screen. You can reset all programmable names to their default settings. You may also initiate name programming from this screen. See ***Assigning or Changing Name Information*** on page 77.

Changing the Display of *Selected* Name Information

1. Select ***On-Screen Text Display*** from the *Dome Configuration Menu*.
2. Select ***Name Configuration Menu***.

   The *Name Configuration Menu* appears.
3. Move the highlight bar to the item whose display setting you want to change.
4. Change the setting.
   - Choose ***On*** to display name information on the monitor.

- Choose ***Off*** to prevent name information from appearing on the monitor.

The default settings are Off for Camera, Areas, Presets, and Patterns, and On for Alarms.

5. Repeat steps 3 and 4 for each item you want to change.
6. Do one of the following:
   - To reset all programmable names to their default values, select ***Reset Programmable Names***. Continue with step 7.
   - If you do not want to reset the programmable names, continue with step 8.
7. The following prompt appears on the screen:

   RESET PROGRAMMABLE NAMES
   NO

   - To reset all names to the default value, select ***Yes***. The *Name Configuration Menu* displays. ***"Prog. Names Have Been Reset"*** appears at the bottom of the screen.
   - To cancel resetting of names, select ***No***. The *Name Configuration Menu* displays.

   The default selection is No.
8. Do one of the following:
   - To change programmable name information, continue with ***Assigning or Changing Name Information*** on page 77.
   - To return to the *On-Screen Text Display* settings screen, select ***Exit***. Continue with step 9.
9. Select ***Exit***. The *Dome Configuration Menu* appears.

Assigning or Changing Name Information

With the *Name Configuration Menu* displayed, you can select a menu item to begin name programming.

Names for each selection can be up to 19 characters long. The following characters are available:

- A-Z (upper case)
- a-z (lower case)
- 0-9
- Blank Space
- Minus Sign (-)
- Forward Slash (/)

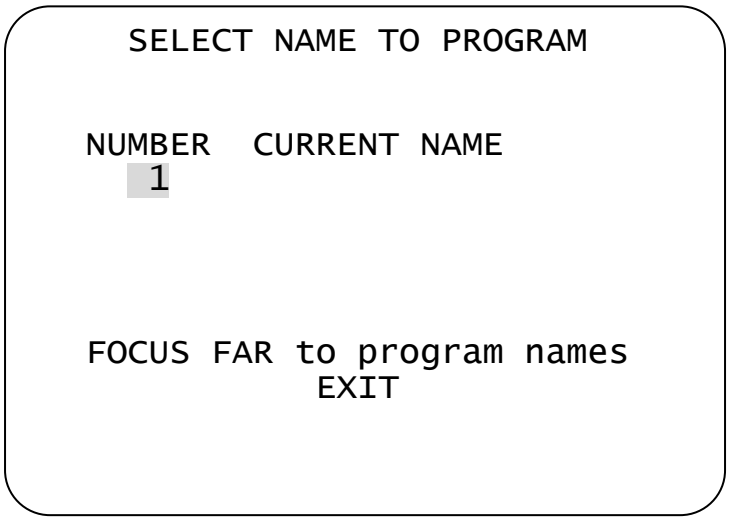
Setting or Changing Names

1. Select ***On-Screen Text Display*** from the *Dome Configuration Menu*.
2. Select ***Name Configuration Menu***.

   The *Name Configuration Menu* appears.
3. Select the name setting you want to change. The choices are ***Camera Name***, ***Area Name***, ***Preset Name***, ***Pattern Name***, and ***Alarm Name***.
   - If you choose *Camera Name*, continue with step 6.
   - If you choose *Area Name*, *Preset Name*, *Pattern Name*, or *Alarm Name*, continue with step 4.

4. The *Select Name to Program* screen appears.

Figure 68. Select Name to Program screen

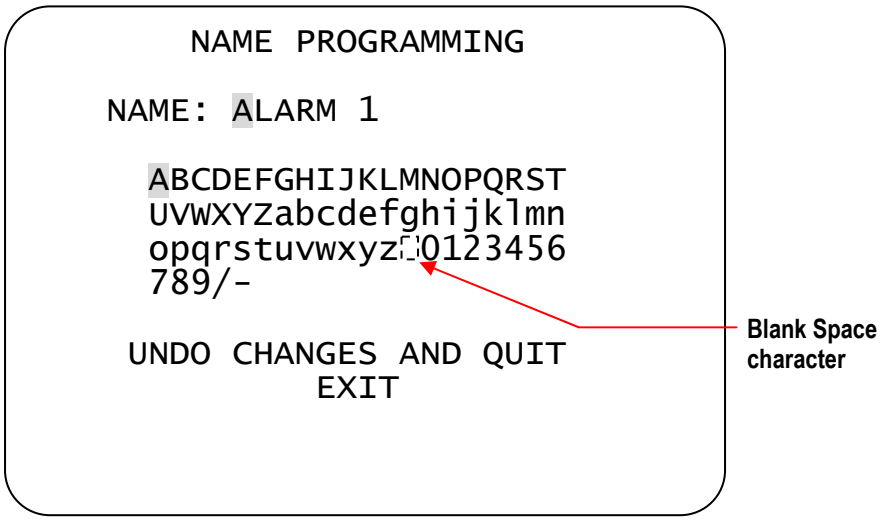


5. Press **Zoom** to change the number. When the item whose name you want to change appears press **Focus Far**.

Note: If Presets, Patterns, or Areas have been programmed, the dome automatically points to the starting position of the associated selection each time the number is advanced.

6. The *Name Programming* screen appears.

Figure 69. Example Name Programming Screen



7. Move the blinking highlight around the available characters. When the correct character is highlighted, press **Focus** to select it.

   If you make a mistake, **Zoom In** moves the cursor one space right, and **Zoom Out** moves the cursor one space left in the name.

8. Repeat step 7 until the name is complete.
9. Do one of the following:
   - To save the name changes, select ***Exit***.
   - To discard the name changes, select ***Undo Changes and Quit***.
10. Do one of the following:
   - If you were changing the camera name, continue with step 12.
   - If you were changing the name of an area, preset, pattern or alarm, the *Select Name to Program* screen appears. Continue with step 11.
11. Do one of the following:
   - To make additional changes to the same type of name selected in step 3, repeat steps 4 through 10.
   - To return to the *Name Configuration Menu*, select ***Exit***, and continue with step 12.
12. Do one of the following:
   - To make additional name changes, repeat steps 3 through 11.
   - To return to *On-Screen Text Display*, select ***Exit***. Continue with step 13.
13. Select ***Exit***. The *Dome Configuration Menu* appears.

Changing the Settings for Text Displayed On-Screen

You may customize the way text is displayed on-screen. You have the choice of displaying text as translucent (slightly clear) or solid, with or without outlines.

To change these settings, select ***Text Attribute Options*** from the *On-Screen Text Display* screen. The following screen appears:

Figure 70. Text Attribute Options screen

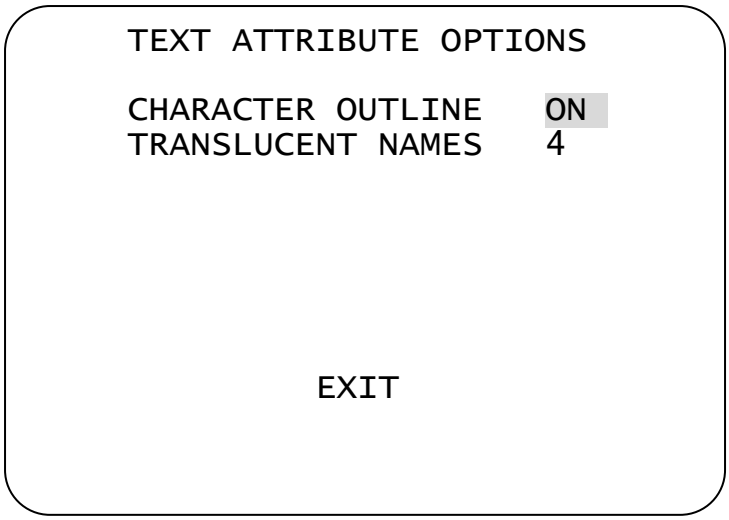
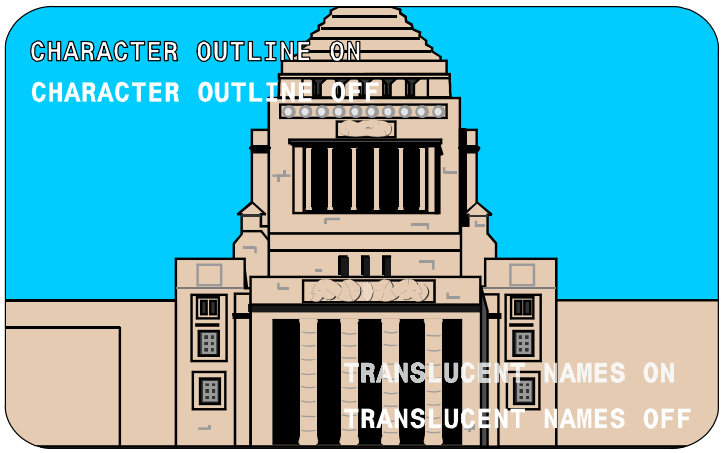


Figure 71 illustrates the types of text attributes available.

Figure 71. Examples of text attributes



If the video background is light, enable character outlines. If on-screen text obscures the video being displayed, enable translucent names. Character outlines and translucent names may be used together to best suit your video environment.

I M P O R T A N T

If you have Privacy Zones enabled, the appearance of the text automatically changes to solid. Changing the text appearance to translucent will have no effect until the Privacy Zones are hidden or deleted. See ***Chapter 4: Configuring Alarms, Areas, Home, Privacy Settings, Presets and Scan Limits*** for more information about Privacy Zones.

Changing On-Screen Text Appearance

1. Select ***On-Screen Text Display*** from the *Dome Configuration Menu*.
2. Select ***Text Attribute Options***.

   The *Text Attribute Options* screen appears. The highlight bar appears on ***Character Outline***.
3. Change the setting.
   - Select ***On*** to display text with an outline around each character.
   - Select ***Off*** to display without an outline around each character.

   The default setting is On.
4. Do one of the following:
   - If you want to change the text appearance for dome names and status information, move the highlight bar to ***Translucent Names***. Continue with step 5.
   - If you are finished making changes, continue with step 6.

5. Change the ***Translucent Names*** setting within a range of 2 through 7.
   - Select ***2*** to display text associated with dome names and status information at its most translucent (slightly clear).
   - Select ***7*** to display text associated with dome names and status information as solid (opaque).

   The default setting is 4.
6. Select ***Exit*** to return to the *On-Screen Text Display* screen.
7. Select ***Exit***. The *Dome Configuration Menu* appears.

Chapter 6: Configuring Language and Password Settings

This chapter explains how to change the language for dome messages and text, and how to set and enable the dome password.

When ***Language / Password*** is selected from the *Dome Configuration Menu*, the following screen appears:

Figure 72. Language / Password screen

From this screen, you can choose the language for the menus, status information, and prompts from the dome. You can also set and enable the use of the dome password.

- To make changes, select a menu item to display the associated settings.
- To change the settings, move the highlight bar to appropriate field and make the changes.
- To return to the *Dome Configuration Menu*, select ***Exit***.

Selecting a Language for Dome Messages and Prompts

The dome supports menus, status information, and prompts in English, Spanish, French, German, Italian, and Portuguese.

Note: When the dome is initially installed, the default language setting is **English**.

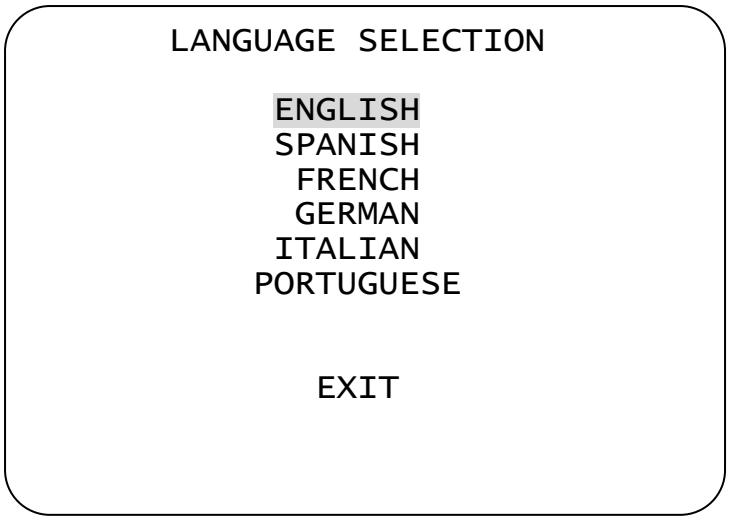
IMPORTANT

If Portuguese is the selected language, the characters “ã” and “õ” will not be displayed on the screen. This is due to a limitation of the text overlay chip.

Changing the Language Setting

1. Select ***Language / Password*** from the *Dome Configuration Menu*. The *Language / Password* screen appears (Figure 72).
2. Select ***Language Selection*** from the *Language / Password* screen. The following screen appears:

Figure 73. Language Selection screen



3. To select the desired language, move the highlight bar to the appropriate language setting, and then press **Focus Far**.
   The following screen appears for a few seconds, and then the *Language / Password* screen appears in the newly selected language.

Figure 74. Change Language screen

Note: Changing the language does not alter any previously programmed names. Only default names, such as ***Preset 1***, change to the new language setting

4. Select ***Exit*** to return to the *Dome Configuration Menu*.

Setting and Enabling the Dome Password

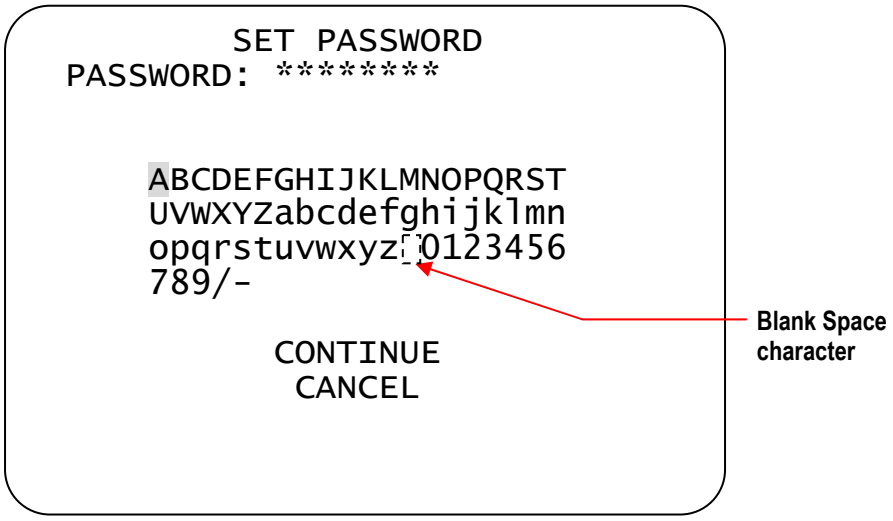
To prevent unauthorized use of the configuration utility, you may choose to enable password protection. There are two parts to using passwords with your dome: setting a password and enabling password use. The dome password can be from 1 to 8 characters long. The characters available depend on the current language setting.

Setting or Changing the Dome Password

1. Select ***Language/Password*** from the *Dome Configuration Menu*.
2. Select ***Set Password***.

   The *Set Password* screen appears.

Figure 75. Set Password screen



3. Move the blinking highlight around the available characters. When the correct character is highlighted, press **Focus Far**.

   If you make a mistake, press **Zoom In** to move the cursor one space right or **Zoom Out** to move the cursor one space left.

4. Repeat step 3 until the password is complete. When finished, select ***Continue***.
5. You must successfully enter the password twice. Use the procedure in step 3 to enter the password again. When finished, select ***Continue***.

Note: If the passwords do not match, you must start over. Return to step 3 and repeat the procedure.

6. The *Language/Password* screen appears. Select ***Exit***. The *Dome Configuration Menu* appears.

Enabling or Disabling Password Protection

Password protection must be enabled before passwords can be used. To enable or disable the dome password:

1. Select ***Language/Password*** from the *Dome Configuration Menu*.
2. Move the highlight bar to ***Password Protection***.
3. Change the setting.
   - Select ***ON*** to enable password protection.
   - Select ***OFF*** to disable password protection.

   The default setting is OFF.
4. Select ***Exit***. The *Dome Configuration Menu* appears.

Tip: Instructions for entering the dome password are found in ***Chapter 1.***

Chapter 7: Displaying Dome Information

This chapter explains how to display dome information and operating information.

Understanding the Dome Information Screen

The *Dome Information* screen varies depending on the camera dome and enables you to view essential information about the camera dome if service is required.

The information that appears in the dome information screens, ***Dome Model*** and ***Dome Statistics***, cannot be altered and is provided for information purposes only. However, the ***Init Dome*** , ***Calibration***, and ***IO Configuration*** screens require user interaction, while the ***Base IO Status*** and ***Base IO Control*** screens contain fields that can be changed.

Figure 76. Dome Information screen–camera domes with outdoor IO boards

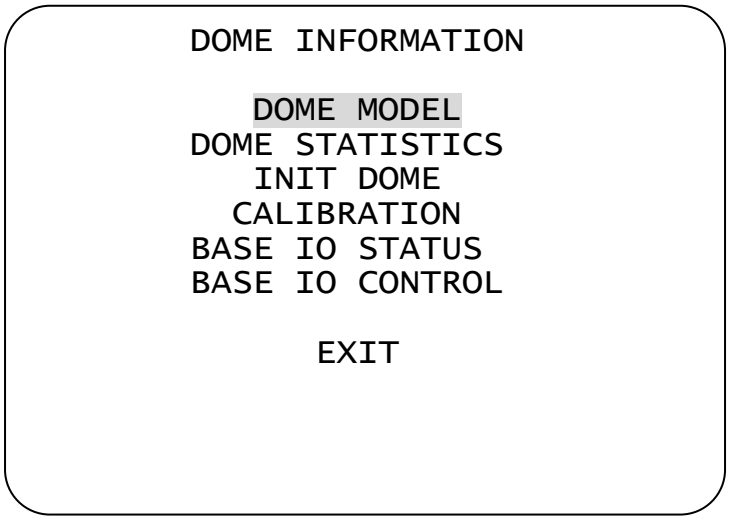


Figure 77. Dome Information screen–camera domes with indoor IO boards

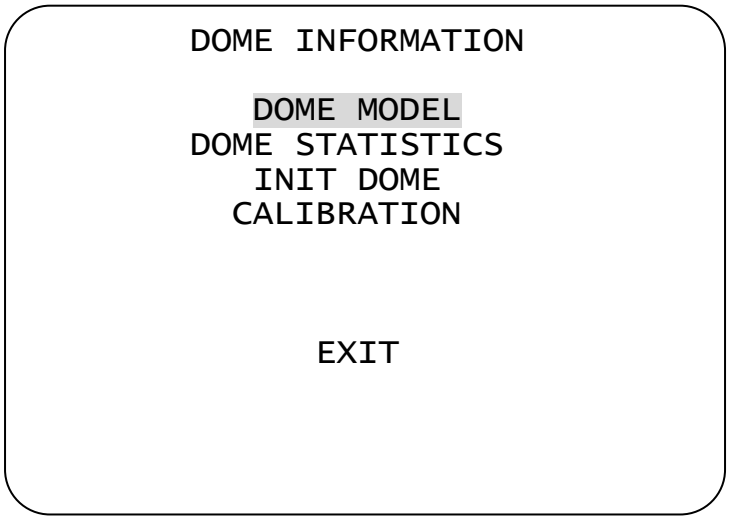
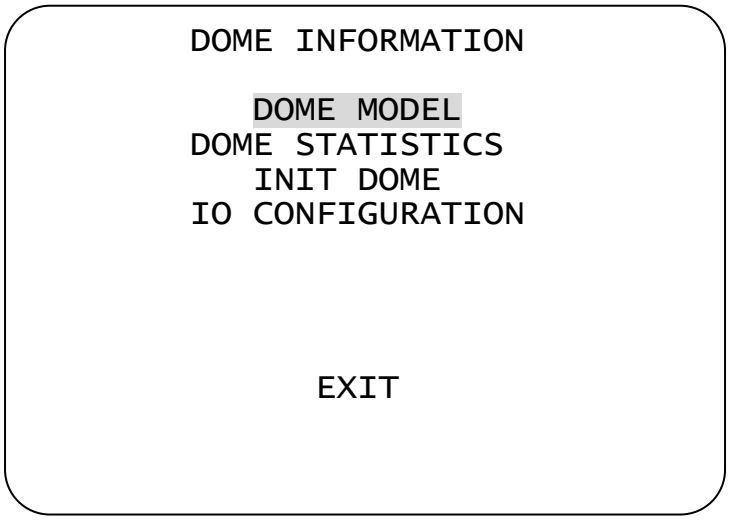


Figure 78. Dome Information screen–camera domes with legacy IO boards

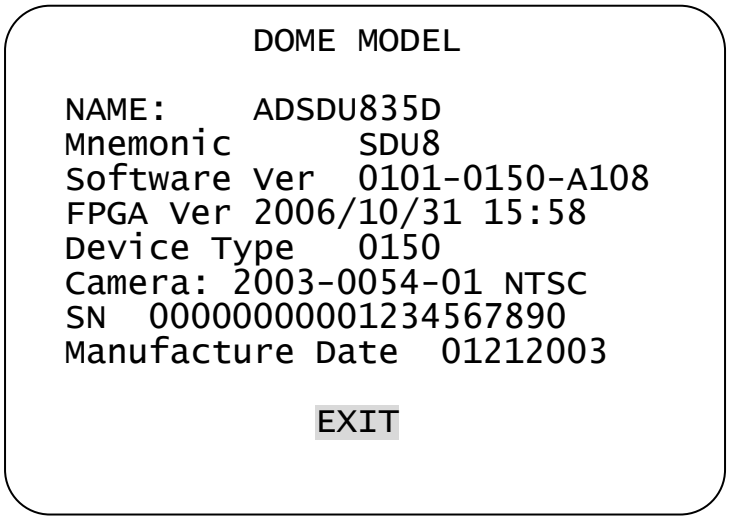


- (All dome models) Select ***Dome Model*** to display basic dome information (Figure 79 on page 88).
- (All dome models) Select ***Dome Statistics*** to display additional information (Figure 80 on page 88).
- (All dome models) Select ***Init Dome*** to clear all user-programmed data and set dome to factory defaults (Figure 81 on page 89). When used with a legacy I/O board, ***Init Dome*** only clears memory in the dome.
- (Indoor and outdoor domes only) Select ***Calibration*** to display the camera calibration screens (Figure 83 on page 91).
- (Legacy IO board only) Select ***IO Configuration*** to configure a camera attached to a legacy IO board for either indoor or outdoor operation (Figure 85 on page 92).
- (Outdoor domes only) Select ***Base IO Status*** to display base IO operating conditions and status (Figure 86 on page 93).
- (Outdoor domes only) Select ***Base IO Control*** to display the base IO firmware version, enable firmware updates, and control the camera dome blower and heater (Figure 87 on page 94).
- Select ***Exit*** to return to the *Dome Configuration Menu*.

Viewing Dome Model Information

(*All dome models*) The ***Dome Model*** screen provides basic dome information that includes the dome model and type, mnemonic, software and FPGA versions, serial number, and manufacture date.

Figure 79. Dome Model screen



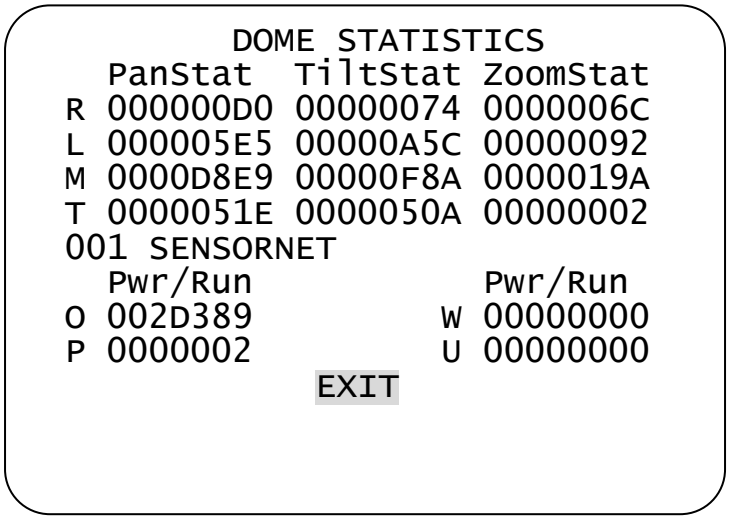
Note: The ***Manufacture Date*** information appears in ***Month-Date-Year (MMDDYYYY)*** format.

When you are finished viewing the dome model information, select ***Exit*** to return to the *Dome Information* screen.

Viewing Dome Operating Statistics

(*All dome models*) When ***Dome Statistics*** is selected from the *Dome Information* screen, the following information is displayed:

Figure 80. Dome Statistics screen



From this screen, you can identify the operating statistics for various features of the dome. The information represents either runtime in seconds or number of occurrences (displayed in hexadecimal values). The following table describes the abbreviations used.

Table 10. Dome Statistics screen abbreviations

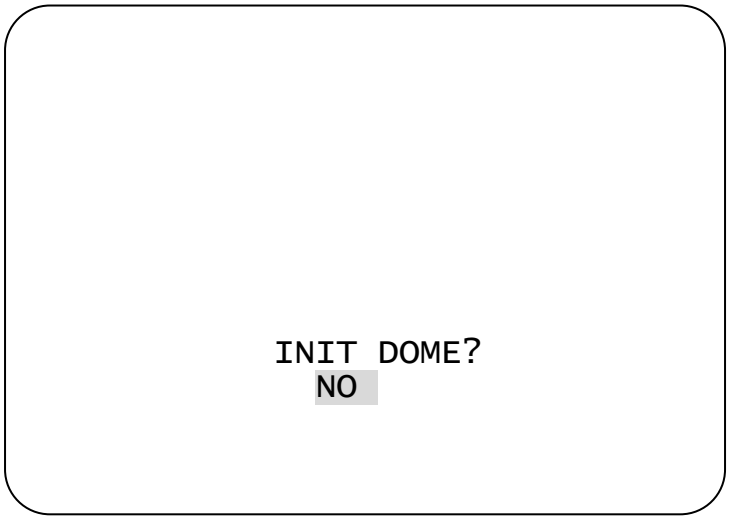
Abbreviation	Description
R	Time moving ***right*** in seconds.
L	Time moving ***left*** in seconds.
M	Total ***move*** time in seconds.
T	Total ***target*** count.
O	***Operating*** time in seconds.
P	***Power*** failure reset count.
W	***Watchdog*** reset count. The watchdog tracks software problems that cause the dome to hang. This number should be zero.
U	***User*** reset count. This represents the resets initiated by the dome operators.

When you are finished viewing the dome statistics, select ***Exit*** to return to the *Dome Information* screen.

Initializing Dome

When ***Init Dome*** is selected from the *Dome Information* screen, the following screen is displayed. It enables you to initialize the dome to factory defaults.

Figure 81. Init Dome screen



Do one of the following:

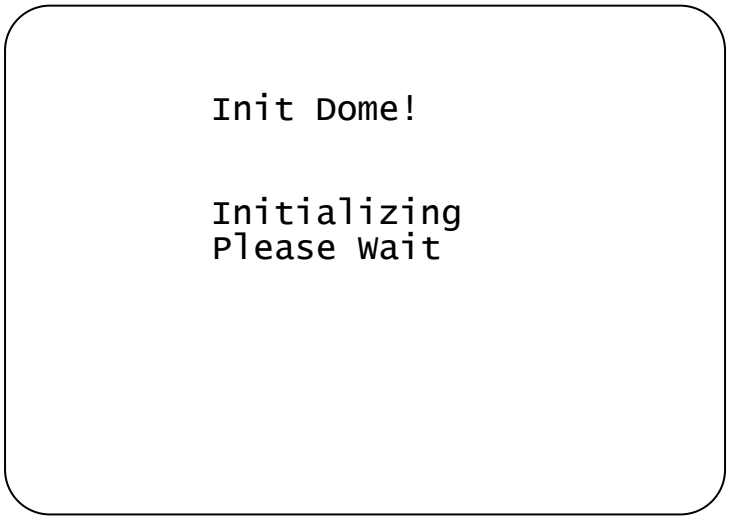
- If you want to clear all user-programmed data and set the dome to factory defaults, select ***YES*** to start initialization. When you choose ***Yes***, a screen is displayed that indicates the

dome is being initialized (Figure 82). After initialization is complete, the *Dome Information* screen is redisplayed.

- If you do not want to clear dome user-programmed data and set to factory defaults, select ***NO*** to cancel the initialization process and return to the *Dome Information* screen.

Note: The ***Init Dome*** command erases all memory content from the IO board, including all presets and patterns that have been saved. Whenever you update the dome firmware, it is important to use the Init dome command *after* the upgrade has completed.

Figure 82. Initializing dome screen



Using the Calibration Screen

(*Indoor and outdoor domes*) ***Calibration*** refers to using the configuration utility to define a zero reference point (or target) from which all other camera targets will be referenced when a dome is replaced on a base.

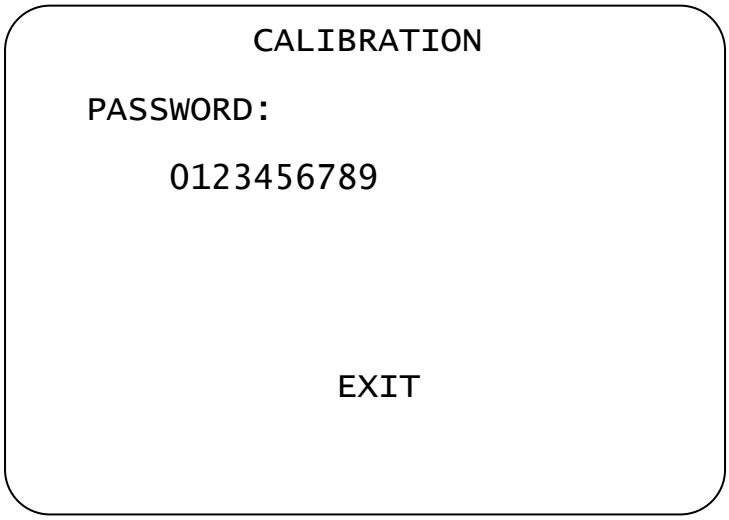
Note: This procedure is only performed when an installed camera dome is replaced by another dome in an existing base. The new dome then can be calibrated to conform with the data already stored in the dome base.

During calibration, the replacement camera is pointed at the desired target, which is the first object the dome being replaced was set to and whose position was initially recorded in the base memory. This object becomes the calibration reference point for the new dome camera. This should be a permanent object that will not or cannot be moved, such as a door, and its position should be written down for future reference.

Note: This feature is only applicable to the Indoor Housing IO board: P/N 0312-3006-01, and the Outdoor Housing IO board: P/N 0312-2124-03.

1. When ***Calibration*** is selected from the *Dome Information* screen, the following screen is displayed and prompts you to enter a password.

Figure 83. Calibration password screen

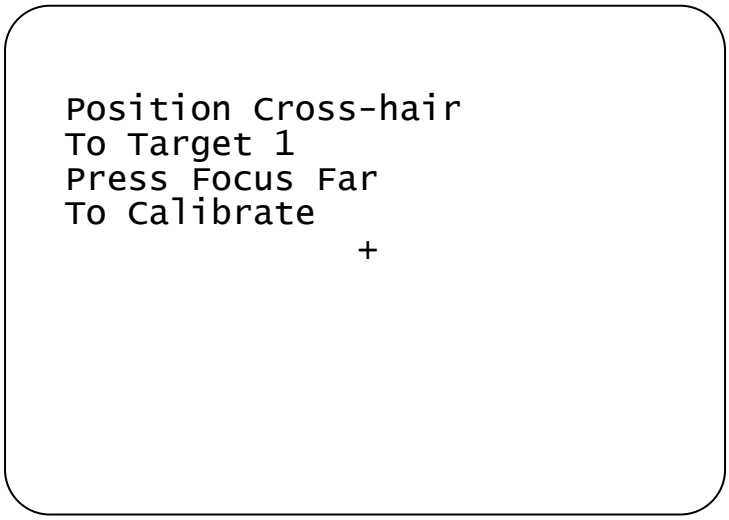


2. Enter the correct password (135246) from the keyboard, select ***Exit***, and then press **Focus Far**. The calibration screen (Figure 84) is displayed, which allows you to define and set the camera's zero-reference point.

Note: The password, 135246, cannot be changed.

3. Use the crosshair (looks like a plus symbol) in the middle of the screen to position the camera on the zero reference point (target), and then press **Focus Far** to set the calibration reference point. The *Dome Information* screen is then redisplayed.

Figure 84. Calibration screen

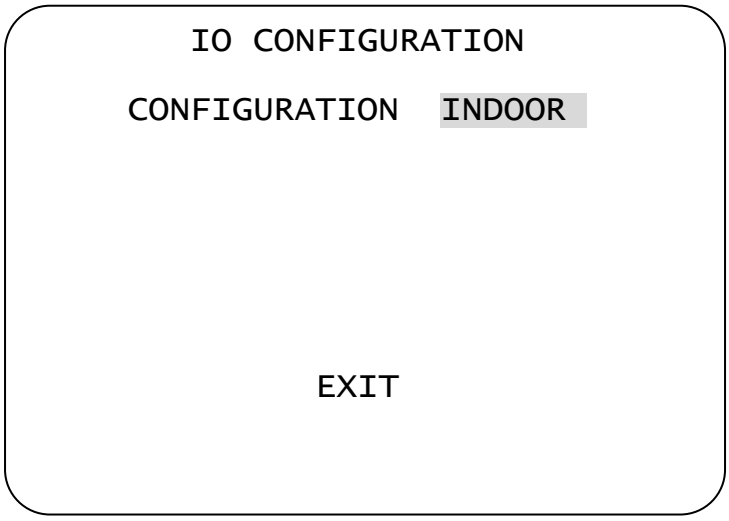


Using the IO Configuration Menu

(*Indoor and outdoor domes*) The ***IO Configuration*** screen (Figure 85) allows you to configure cameras for either indoor or outdoor operation.

- Indoor operation does not use dome heaters or blowers.
- Outdoor operation uses dome heaters and blowers. You must set this screen to **Outdoor** for the heaters and blowers to work.

Figure 85. IO Configuration screen



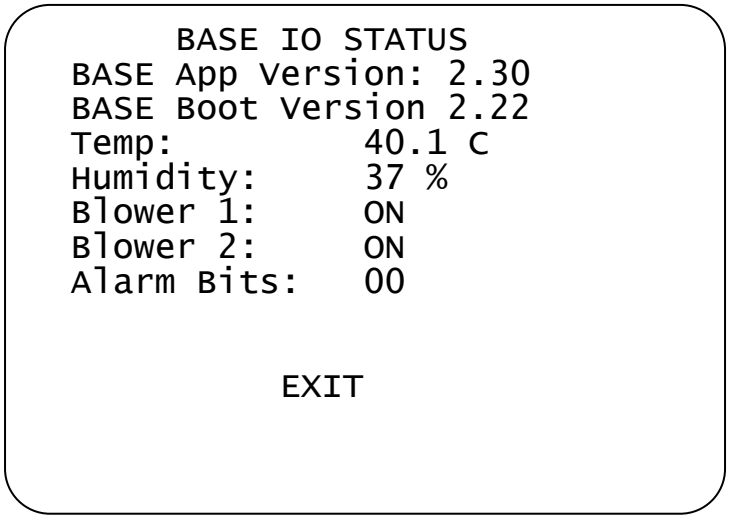
When you are finished configuring the camera's operational environment, select ***Exit*** to return to the *Dome Information* screen.

Viewing Base IO Status Information

(*Outdoor domes only*) When ***Base IO Status*** is selected from the *Dome Information* screen, the following screen is displayed and shows the base IO operating conditions and status. The status information is automatically updated as it changes.

Note: This feature is only applicable to the Outdoor Housing IO board: P/N 0312-2124-03.

Figure 86. Base IO Status screen



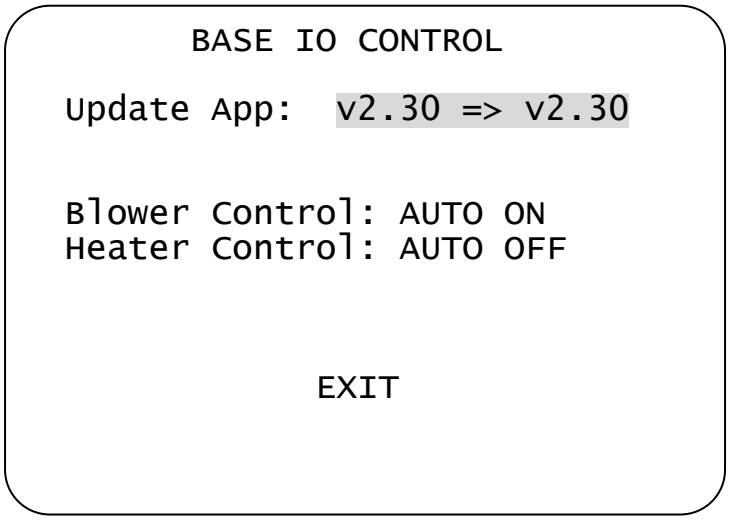
When you are finished viewing the base IO status, select ***Exit*** to return to the *Dome Information* screen.

Working With the Base IO Control Screen

(*Outdoor domes only*) When ***Base IO Control*** is selected from the *Dome Information* screen, the following screen is displayed and shows the base IO firmware version, enables firmware updates, and controls the camera dome blower and heater

Note: This feature is only applicable to the Outdoor Housing IO board: P/N 0312-2124-03.

Figure 87. Base IO Control screen



Note: Each time you upload new code to the dome, be sure to update the IO base as well. If the number to the left of the arrow is lower than the number to the right, highlight this line to start the firmware upgrade.

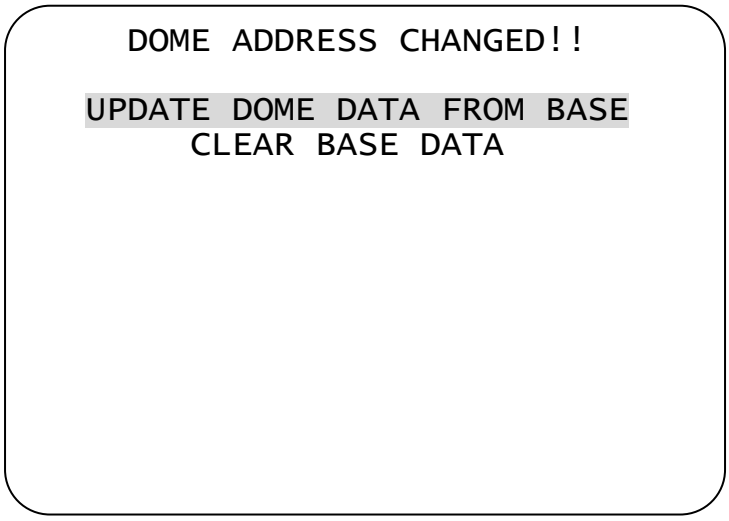
When you are finished working with the base IO controls, select ***Exit*** to return to the *Dome Information* screen.

Changing the Dome Address

When a dome powers up, it finds Pan/Tilt home, determines the network type, and sequentially performs the following three tests:

1. The dome checks to see if its own address has changed. If its own address changed since the last time it was powered up, the dome local configuration memory is cleared.
2. Next, the dome checks to see if its address matches the IO base address.
   - If the dome address does not match the address currently stored in the IO base, the *Dome Address Changed* screen (Figure 88) appears and allows you to update the dome data from the IO board base memory or to clear the IO base memory.
   - If the dome address matches the IO base address, the dome performs the next verification step.

Figure 88. Dome Address Changed screen

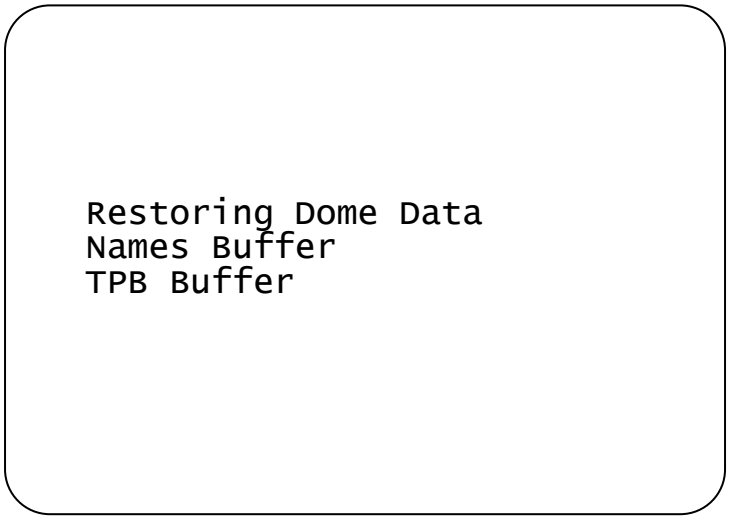


Do one of the following:

- If you want to update the dome data from the base memory, highlight ***Update Dome Data from Base***, and then press **FOCUS FAR**. A screen briefly appears that indicates the base memory is being updated (Figure 89).

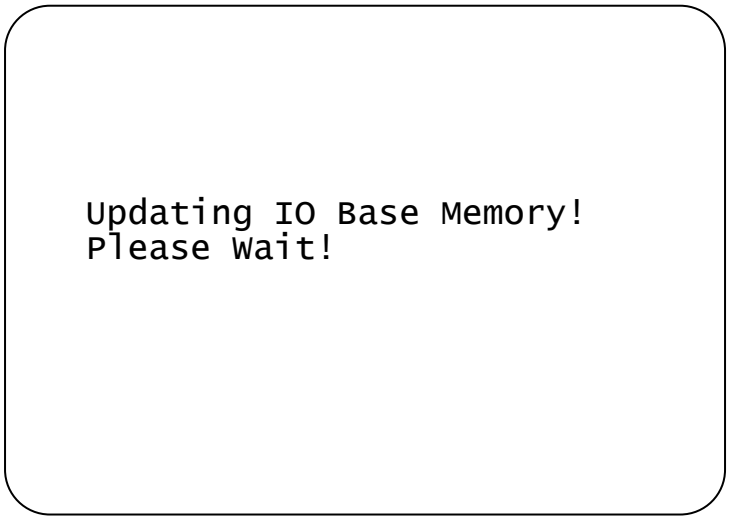
Note: ***Update Dome Data From Base*** should only be used when swapping identical dome models.

Figure 89. Restoring Dome Data screen



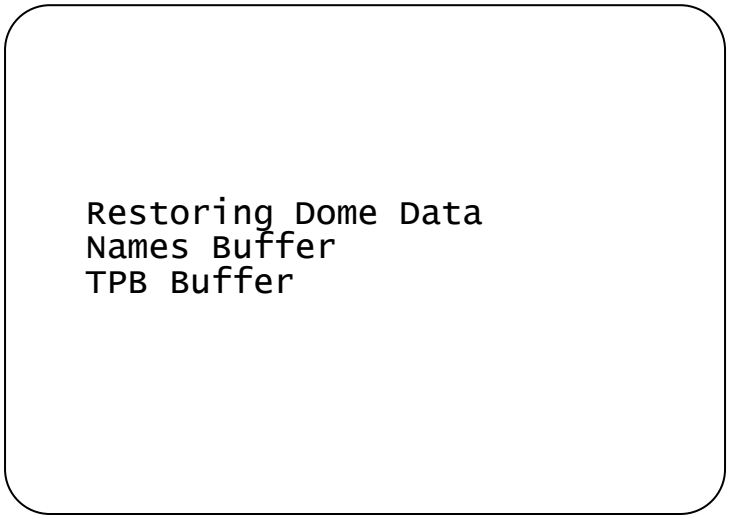
- If you want to clear the base data, highlight ***Clear Base Data***, and then press **FOCUS FAR**. The configuration data is then loaded into the base from the dome. Any user-programmed data in the base remains in the base IO memory. A screen appears that indicates the base data is being cleared (Figure 90).

Figure 90. Updating IO Base Memory screen



3. The *Restoring Dome Data* screen (Figure 91) briefly appears. If you want to ensure IO base memory is cleared, refer to the ***Init Dome*** command on page 89.

Figure 91. Restoring Dome Data screen



Note: After the verification tests are completed, the last screen displayed before the dome was powered down will reappear.

Appendix A: SensorNet and RS-422 Command Summary

This appendix summarizes the SensorNet and RS-422 controller commands used with the Configuration Utility. It also provides a list of compatible controllers.

Command Summary

The following table lists the commands to operate the configuration utility when the dome is installed in a SensorNet or RS-422 environment.

If you want to …	Use …
Start the configuration utility.	Press and hold **Iris Open,** press and hold a **Focus button,** then press **Zoom Out***
Move the ***highlight bar*** on the active menu.	**Pan/Tilt**
Select the highlighted item on the active menu.	**Focus**
Increase the value of the selected setting. For example, Red or Blue white balance values.	**Zoom In**
Decrease the value of the selected field. For example, Red or Blue white balance values.	**Zoom Out**
Display the ***next choice*** for the setting. For example, Maximum Zoom setting.	**Zoom In**
Display the ***previous choice*** for the setting. For example, Maximum Zoom setting.	**Zoom Out**
Save changes and exit the utility from any screen.	**Iris Close,** then **Focus***
Manually activate or deactivate ***IR mode***.	Press and hold **Iris Open,** press and hold **Focus Far,** then press **Focus Near***

* These commands not supported with MPLT with ADCC0200 or ADCC0300 controller. Refer to the appropriate operator's manual for instructions.

Setting Names / Working with Passwords

When setting names or entering password information, the screen displays the available characters in the selected languages. In these situations, the following commands are used:

If you want to …	Use …
Move the ***highlight left or right*** in the character field.	**Pan**
Move the ***highlight up or down*** in the character field.	**Tilt**
Select the highlighted character in the character field.	**Focus**
Move the cursor to the ***right of the current character*** in the name or password.	**Zoom In**
Move the cursor to the ***left of the current character*** in the name.	**Zoom Out**

Supported Controllers and Matrix Switching Systems

This section provides information about the SensorNet and RS-422 controllers and matrix switchers that are compatible with the SpeedDome Ultra 8 camera dome. Refer to the controller information for details concerning specific functions supported.

Note: This list of controllers is complete as of the time of publication. Other controllers may be supported. Contact your Sales Representative for current information.

Controller/Switcher	Page	Controller/Switcher	Page
• VM8	99	• AD1650	100
• VM16/ADTT16 (White Touch Tracker)	99	• AD168	100
• VM16E/ADTT16E (Black Touch Tracker)	99	• AD2050	100
• VM32/AD32	99	• MegaPower LT	101
• VM96 (1)	99	• MegaPower 48	101
• AD2150/AD2350	100	• MegaPower 1024/3200/MP CPU	101

VM8

Supported Protocol	SensorNet
Maximum Presets	0
Maximum Patterns (1)	1
DirectSet Menu	Not supported
Address Range	1-8

Notes:

(1) Apple Peel only. Programmable patterns are not available.

VM16/ADTT16 (White Touch Tracker)

Supported Protocols	SensorNet RS-422 (1)
Maximum Presets	96 – SensorNet 4 – RS-422
Maximum Patterns (2)	3
DirectSet Menu	Not supported
Address Range	1-16

Notes:

(1) Requires RCSN422 code converter.

(2) Patterns are limited by time and the number of available dome commands. Total time for each pattern cannot exceed 6 minutes 50 seconds. Total dome commands used in all patterns cannot exceed 99.

VM16E/ADTT16E (Black Touch Tracker)

Supported Protocols	SensorNet RS-422 (1)
Maximum Presets	96 – SensorNet 4 – RS-422
Maximum Patterns (2)	3
DirectSet Menu	Yes (3)
Address Range	1-16 or 1-64 (3)

Notes:

(1) Requires RCSN422 code converter.

(2) Patterns are limited by time and the number of available dome commands. Total time for each pattern cannot exceed 6 minutes 50 seconds. Total dome commands used in all patterns cannot exceed 99.

(3) Requires firmware version 0701-2833-0103 (EEPROM) / 0701-2834-0201 (Flash PROM) or newer.

VM32/AD32

Supported Protocols	SensorNet RS-422 (1)
Maximum Presets	96 – SensorNet 4 – RS-422
Maximum Patterns (2)	3
DirectSet Menu	Not supported
Address Range	1-32

Notes:

(1) Requires RCSN422 code converter.

(2) Patterns are limited by time and the number of available dome commands. Total time for each pattern cannot exceed 6 minutes 50 seconds. Total dome commands used in all patterns cannot exceed 99.

VM96 (1)

Supported Protocols	SensorNet RS-422
Maximum Presets	Unlimited (2)
Maximum Patterns (3)	3
DirectSet Menu	Not supported
Address Range	1-96

Notes:

(1) Requires software version 5.2 or newer.

(2) Preset information is stored at the host, not the dome.

(3) Patterns are limited by time and the number of available dome commands. Total time for each pattern cannot exceed 6 minutes 50 seconds. Total dome commands used in all patterns cannot exceed 99.

AD2150/AD2350

Supported Protocol	RS-422 (1)
Maximum Presets	16 (2) or 60 (3)
Maximum Patterns (4)	3
DirectSet Menu	Not supported
Address Range	1-32

Notes:

(1) Requires the AD2083-02 series code converter.

(2) Preset information is stored at the converter, not the dome.

(3) Requires AD2083-02 with firmware version 0701-11YB-156A or newer. Preset information is stored in the dome, not the converter.

(4) Patterns are limited by time and the number of available dome commands. Total time for each pattern cannot exceed 6 minutes 50 seconds. Total dome commands used in all patterns cannot exceed 99.

AD1650

Supported Protocol	RS-422 (1)
Maximum Presets	16 (2) or 60 (3)
Maximum Patterns (4)	3
DirectSet Menu	Not supported
Address Range	1-128 (5)

Notes:

(1) Requires the AD2083-02 series code converter.

(2) Preset information is stored at the converter, not the dome.

(3) Requires AD2083-02 with firmware version 0701-11YB-156A or newer. Preset information is stored in the dome, not the converter.

(4) Patterns are limited by time and the number of available dome commands. Total time for each pattern cannot exceed 6 minutes 50 seconds. Total dome commands used in all patterns cannot exceed 99.

(5) Requires additional equipment to achieve these numbers. A dome address within each group of 64 or 99 cameras is reserved as a global broadcast address.

AD168

Supported Protocols	SensorNet (1) RS-422 (1) or (2)
Maximum Presets	16 (1)(2), 64 (1)(3), or 60 (4)
Maximum Patterns (5)	3
DirectSet Menu	Not supported
Address Range	SensorNet: 1-180 RS-422: 1-99 (1)(6) or 1-180 (2)(6)

Notes:

(1) Requires the appropriate code control module.

(2) Requires the AD2083-02 series code converter.

(3) Presets information is stored at the converter or control module, not the dome.

(4) Requires AD2083-02 with firmware version 0701-11YB-156A or newer. Preset information is stored in the dome, not the converter.

(5) Patterns are limited by time and the number of available dome commands. Total time for each pattern cannot exceed 6 minutes 50 seconds. Total dome commands used in all patterns cannot exceed 99.

(6) Requires additional equipment to achieve these numbers. A dome address within each group of 64 or 99 cameras is reserved as a global broadcast address.

AD2050

Supported Protocol	RS-422 (1)
Maximum Presets	16 (2) or 60 (3)
Maximum Patterns (4)	3
DirectSet Menu	Not supported
Address Range	1-1024 (5)

Notes:

(1) Requires the AD2083-02 series code converter.

(2) Preset information is stored at the converter, not the dome.

(3) Requires AD2083-02 with firmware version 0701-11YB-156A or newer. Preset information is stored in the dome, not the converter.

(4) Patterns are limited by time and the number of available dome commands. Total time for each pattern cannot exceed 6 minutes 50 seconds. Total dome commands used in all patterns cannot exceed 99.

(5) Requires additional equipment to achieve these numbers. A dome address within each group of 64 or 99 cameras is reserved as a global broadcast address.

MegaPower LT

Supported Protocol	SensorNet
Maximum Presets	96
Maximum Patterns (1)	3
DirectSet Menu	Yes (2)
Address Range	1-32

Notes:

(1) Patterns are limited by time and the number of available dome commands. Total time for each pattern cannot exceed 6 minutes 50 seconds. Total dome commands used in all patterns cannot exceed 99.

(2) Requires a compatible keyboard.

MegaPower 48

Supported Protocols	SensorNet RS-422
Maximum Presets	96 (1)
Maximum Patterns (2)	3
DirectSet Menu	Yes (3)
Address Range	1-48

Notes:

(1) Preset information is stored at the host, not the dome.

(2) Patterns are limited by time and the number of available dome commands. Total time for each pattern cannot exceed 6 minutes 50 seconds. Total dome commands used in all patterns cannot exceed 99.

(3) Requires firmware 1.07 or newer and a compatible keyboard.

MegaPower 1024/3200/MP CPU

Supported Protocol	RS-422 (1)
Maximum Presets	16 (2) or 60 (3)
Maximum Patterns (4)	3
DirectSet Menu	Not supported
Address Range	1-1024 (5), 1-3200 (6)

Notes:

(1) Requires the AD2083-02 series code converter.

(2) Preset information is stored at the converter, not the dome.

(3) Requires AD2083-02 with firmware version 0701-11YB-156A or newer. Preset information is stored in the dome, not the converter.

(4) Patterns are limited by time and the number of available dome commands. Total time for each pattern cannot exceed 6 minutes 50 seconds. Total dome commands used in all patterns cannot exceed 99.

(5) Requires additional equipment to achieve these numbers. A dome address within each group of 64 or 99 cameras is reserved as a global broadcast address.

(6) MegaPower 3200 supports up to 3200.

Performance Notes

The following considerations should be made when using the SpeedDome Ultra 8 camera dome in a SensorNet or RS-422 environment.

Alarm Action Configuration

The following controllers allow the alarm actions for domes to be specified at the controller:

- VM16 Plus/ADTT16/ADTT16E
- VM32/AD32/AD32E
- VM96
- Touch Tracker 16 Elite
- AD matrices with AD2083-02A code units
- AD168/MP168 with CCM or AD2083-02A.

Do not use both the dome configuration utility and the controller to assign the alarm actions for the same input. ***Use only the dome configuration utility or the controller to assign the alarm actions.***

Appendix B: Manchester Command Summary

This appendix summarizes the Manchester controller commands used with the Configuration Utility. It also provides a list of additional Manchester commands that can be used with the dome and compatible controllers.

Command Summary

The following table lists the commands to operate the configuration utility when the dome is installed in a Manchester environment. The keyboard must be in programming mode to perform these functions.

If you want to …	Use …
Start the configuration utility.	**66**, then press **Set Preset** [1]
Move the ***highlight bar*** on the active menu.	**Pan/Tilt**
Select the highlighted item on the active menu.	**Focus**
Increase the value of the selected setting. For example, Red or Blue white balance values.	**Zoom In**
Decrease the value of the selected field. For example, Red or Blue white balance values.	**Zoom Out**
Display the ***next choice*** for the setting. For example, Maximum Zoom setting.	**Zoom In**
Display the ***previous choice*** for the setting. For example, Maximum Zoom setting.	**Zoom Out**
Save changes and exit the utility from any screen.	**Iris Close,** then **Focus**

[1] The label may read **Set Shot** on some keyboards.

Setting Names / Working with Passwords

When setting names or entering password information, the screen displays the available characters in the selected languages. In these situations, the following commands are used:

If you want to …	Use …
Move the ***highlight left or right*** in the character field.	**Pan**
Move the ***highlight up or down*** in the character field.	**Tilt**
Select the highlighted character in the character field.	**Focus**
Move the cursor to the ***right of the current character*** in the name or password.	**Zoom In**
Move the cursor to the ***left of the current character*** in the name.	**Zoom Out**

Additional Manchester Commands

The following tables summarize the special commands available when using the dome in a Manchester network. These commands are available when you enter the number listed and press the **Set Preset** or **Call Preset** button on the controller.

Set Commands

This table describes the functions that can be performed when you enter the number listed then press the **Set Preset** button. The keyboard must be in programming mode to perform these functions.

If you want to …	*Use …*
Reset the Dome	**65 Set Preset**
Activate / Deactivate V-phase delay setting adjustment	**67 Set Preset**
Cancel Pattern Programming	**68 Set Preset**
Save Pattern Programming	**69 Set Preset**
Program Pattern 1	**70 Set Preset**
Program Pattern 2	**71 Set Preset**
Program Pattern 3	**72 Set Preset**

Call Commands

This table describes the functions that can be performed when you enter the number listed then press the **Call Preset** button.

If you want to …	*Use …*
Resume Auto Focus / Auto Iris	**66 Call Preset**
Rotate dome 180° from current position (“flip”)	**67 Call Preset**
Activate/Deactivate IR mode	**68 Call Preset** (1)
Repeats following pattern	**69 Set Preset**
Run Pattern 1	**70 Set Preset**
Run Pattern 2	**71 Set Preset**
Run Pattern 3	**72 Set Preset**

(1) This command changes the IR Mode setting on the Camera Functions menu. See Chapter 3 for information.

Supported Controllers

The following Manchester controllers are compatible with the SpeedDome Ultra 8 camera dome:

Controller	Presets	Patterns	DirectSet Menu	Address Range
AD2150	64	3	No	1-64
MP48	64	3	No	1-64
AD168/MP168	64	3	No	1-64
AD2050/2052	64	3	No	1-64
AD1024	64	3	No	1-64
AD MP CPU	64	3	No	1-64
MP3200	64	3	No	1-64

This list of controllers is complete as of the time of publication. Other controllers may be supported.
Contact your Sales Representative for current information.

Performance Notes

The following considerations should be made when using the SpeedDome Ultra 8 camera dome in a Manchester environment.

Using Auxiliaries

The dome provides four connections for auxiliaries. When used on a Manchester network, Auxiliaries 1 through 3 are supported. Auxiliary 4 is not supported.

Alarm Inputs

When operating on a Manchester network, the dome can be programmed to respond to any of the four available alarm inputs. However, the dome cannot transmit alarm input states to the host controller. If transmitting the alarm input states to the host controller is required, the alarm device must be wired directly to the host controller.

Appendix C: Pelco Coaxitron and "P" Protocols Command Summary

This appendix summarizes the SpeedDome Ultra 8 camera dome features that are supported by the Pelco Coaxitron and "P" protocols. In addition, it provides the controller commands used with the Configuration Utility. It also supplies information about tested Pelco equipment and supported Pelco features.

Supported SpeedDome Ultra 8 Camera Dome Features

With the following exceptions, the SpeedDome Ultra 8 camera dome supports the feature set described in this operator's guide when controlled with Pelco Coaxitron and "P" protocols.

Unsupported SpeedDome Ultra 8 Camera Dome Features

- Pelco controllers that do not support as many presets, patterns, or outputs as the SpeedDome Ultra 8 camera dome are limited to the maximum quantities they are designed to support.
- Saving and exiting from configuration menus using **Iris Close** and **Focus** keys
- Apple Peel pattern (default SpeedDome pattern)
- V-Phase adjustment

Pelco Command Summary

The following table lists the commands to operate the configuration utility when the dome is installed in a Pelco environment.

If you want to …	*Use …*
Start the configuration utility.	**Set Preset 95**
Move the ***highlight bar*** on the active menu.	**Tilt Up/Down**
Select the highlighted item on the active menu.	**Iris Open** (or Focus)
Increase the value of the selected setting. For example, Red or Blue white balance values.	**Pan Right** (or Zoom In)
Decrease the value of the selected field. For example, Red or Blue white balance values.	**Pan Left** (or Zoom Out)
Display the ***next choice*** for the setting. For example, Maximum Zoom setting.	**Pan Right** (or Zoom In)
Display the ***previous choice*** for the setting. For example, Maximum Zoom setting.	**Pan Left** (or Zoom Out)

Setting Names / Working with Passwords

When setting names or entering password information, the screen displays the available characters in the selected languages. In these situations, the following commands are used:

If you want to …	*Use …*
Move the ***highlight left or right*** in the character field.	**Pan**
Move the ***highlight up or down*** in the character field.	**Tilt**
Select the highlighted character in the character field.	**Iris Open** (or Focus)
Move the cursor to the ***right of the current character*** in the name or password.	**Pan Right** (or Zoom In)
Move the cursor to the ***left of the current character*** in the name.	**Pan Left** (or Zoom Out)

Additional Controller Commands

Use the following controller commands to perform these SpeedDome Ultra functions:

If you want to...	*Use...*
Flip the dome 180°	**Call Preset 33**
Return to 0° pan	**Call Preset 34**
Turn ***IR Mode On***	**Set Preset 88**
Turn ***IR Mode Off***	**Set Preset 89**
Reset Dome	**Set Preset 94**

Performance Notes

The following SpeedDome Ultra 8 camera dome features are not supported with the Pelco protocols:

- PAL video format. This will be supported after further testing.
- Long line length applications that require video amplifiers or fiber optics.

Address Settings

The dome must have the correct address setting to operate with Pelco Coaxitron and "P" protocols. For Coaxitron protocol, the address must be set to **893**. For "P" protocol, the address setting is based upon the baud rate setting:

- ***For 2400 baud***, the x100 switch must be set to **6**; the x10 and x1 switches may be set to any number.
- ***For 4800 baud***, the x100 switch must be set to **0**; the x10 and x1 switches may be set to any number.
- ***For 9600 baud***, the x100 switch must be set to **7**, the x10 and x1 switches may set to any number.

Tested Pelco Equipment

The following Pelco equipment has been tested with the SpeedDome Ultra 8 camera dome:

- Pelco 9760CTX
- Pelco MPT 9500

Supported Pelco Features

The SpeedDome Ultra 8 camera dome supports ***Left and Right Scan Limits***, ***Auto Scan***, ***Frame Scan*** and ***Random Scan*** when installed under the Pelco Coaxitron and "P" Protocol environment. The following commands are supported:

If you want to...	*Use...*
Program the ***Left Scan Limit***	**Set Preset 92**
Program the ***Right Scan Limit***	**Set Preset 93**
Activate ***Auto Scan***	**Call Preset 99**
Activate ***Frame Scan***	**Call Preset 98**
Activate ***Random Scan***	**Call Preset 97**
Deactivate Auto, Frame or Random Scan	**Call Preset 96**

Setting Left and Right Scan Limits

Scan Limits allow you to set left and right boundaries for use with the Auto Scan, Frame Scan, and Random Scan functions. If the scan limits are not set, the dome pans continuously to the right when these functions are activated.

IMPORTANT

You must program the Left Scan Limit setting before programming the Right Scan Limit setting. This procedure erases any previously programmed Right Scan Limit setting.

To program the Scan Limits:

1. Select the camera number assigned to the SpeedDome Ultra 8 camera dome.
2. Use the pan/tilt control to position the dome's pointing direction to the ***Left Scan Limit***.
3. Enter **Set Preset 92** to save the setting.
4. Position the dome's pointing direction to ***Right Scan Limit***.
5. Enter **Set Preset 93** to save the setting.

Activating Auto Scan

Auto Scan allows the dome to continuously pan between the left and right scan limit settings. When reaching the right scan limit, the direction is automatically reversed. If no scan limit settings are programmed, the dome pans to the right continuously.

To activate the Auto Scan:

1. Select the camera number assigned to the dome.
2. Enter **Go To Preset 99**.

The Auto Scan runs until stopped by selecting the camera and entering **Call Preset 96**.

Note: Entering a pan/tilt or lens command also stops the scan.

Activating Frame Scan

Frame Scan pans between the left and right scan limits, pausing briefly (3 seconds) at each frame. A frame is equivalent to approximately 10° when the zoom setting is 1X. If the scan limits are not programmed, the Frame Scan pans to the right, pausing at each frame.

To activate the Frame Scan:

1. Select the camera number assigned to the SpeedDome Ultra 8 camera dome.
2. Enter **Call Preset 98**.

The Frame Scan runs until stopped by selecting the camera and entering **Call Preset 96**.

Note: Entering a pan/tilt or lens command also stops the scan.

Activating Random Scan

Random Scan pans between the left and right scan limits for random periods between 1 and 9 seconds, then pauses for periods between 1 and 9 seconds. If the scan limits are not programmed, the Random Scan pans to the right for random periods between 1 and 9 seconds, then pauses for periods between 1 and 9 seconds.

To activate the Random Scan:

1. Select the camera number assigned to the SpeedDome Ultra 8 camera dome.
2. Enter **Call Preset 97**.

The Random Scan runs until stopped by selecting the camera and entering **Call Preset 96**.

Note: Entering a pan/tilt or lens command also stops the scan.

Appendix D: Panasonic Up-the-Coax (UTC) Protocol Command Summary

This appendix summarizes the SpeedDome Ultra 8 camera dome features that are supported by the Panasonic UTC protocol. In addition, it provides the controller commands used with the Configuration Utility. It also provides information about tested Panasonic equipment.

Supported SpeedDome Ultra 8 Camera Dome Features

With the following exceptions, the SpeedDome Ultra 8 camera dome supports the feature set described in this operator's guide when controlled with the Panasonic UTC (Up-the-Coax) protocol.

Unsupported SpeedDome Ultra 8 Camera Dome Features

- Panasonic controllers that do not support as many presets or outputs as the SpeedDome Ultra 8 camera dome are limited to the maximum quantities they are designed to support.
- Saving and exiting from configuration menus using **Iris Close** and **Focus** keys
- Patterns
- V-Phase adjustment
- PAL video format. This will be supported after further testing.
- Long line length applications that require video amplifiers or fiber optics

Panasonic UTC Command Summary

The following table lists the commands to operate the configuration utility when the dome is installed in a Panasonic UTC environment.

If you want to …	Use …
Start the configuration utility.	**Camera Set ON** **Set Up/Esc + Camera**
Move the ***highlight bar*** on the active menu.	**Up/Down**
Select the highlighted item on the active menu.	**SET**
Increase the value of the selected setting. For example, Red or Blue white balance values.	**Right**
Decrease the value of the selected field. For example, Red or Blue white balance values.	**Left**
Display the ***next choice*** for the setting. For example, Maximum Zoom setting.	**Right**
Display the ***previous choice*** for the setting. For example, Maximum Zoom setting.	**Left**
Adjust dome position during menu programming.	**ALT**

Setting Names / Working with Passwords

When setting names or entering password information, the screen displays the available characters in the selected languages. In these situations, the following commands are used:

If you want to …	Use …
Move the ***highlight left or right*** in the character field.	**ALT** enabled**, Left/Right**
Move the ***highlight up or down*** in the character field.	**ALT** enabled**, Up/Down**
Select the highlighted character in the character field.	**SET**
Move the cursor to the ***right of the current character*** in the name or password.	**ALT** disabled**, Right** ***Or*** **ALT** enabled, **Zoom Tele**
Move the cursor to the ***left of the current character*** in the name.	**ALT** disabled**, Left** ***Or*** **ALT** enabled, **Zoom Wide**

Performance Notes

When selecting a dome, a 3- to 5-second delay is necessary for the Panasonic multiplexer to properly identify the dome type. If the dome is moved before the interrogation is complete, the controller recognizes the dome as a "single speed" dome. Once the dome stops moving and the interrogation completes, the normal 8 speed settings are available.

Address Setting

The dome must have the correct address setting to operate with Panasonic UTC protocol. Set the dome address switches to **890**.

Programming Presets

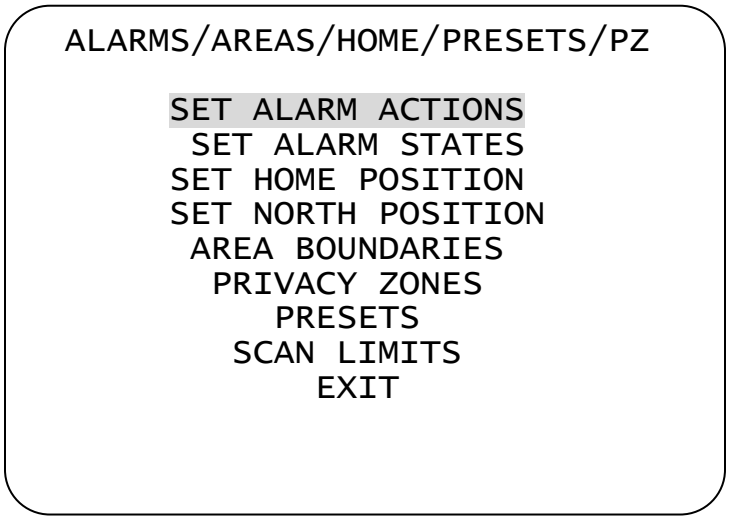
You must use the ***Dome Configuration Menu*** to program Presets. Up to 64 Presets may be programmed.

Note: This procedure has been verified using the following equipment:

- WJ-SX550 Multiplexer
- WV-CU550A Controller

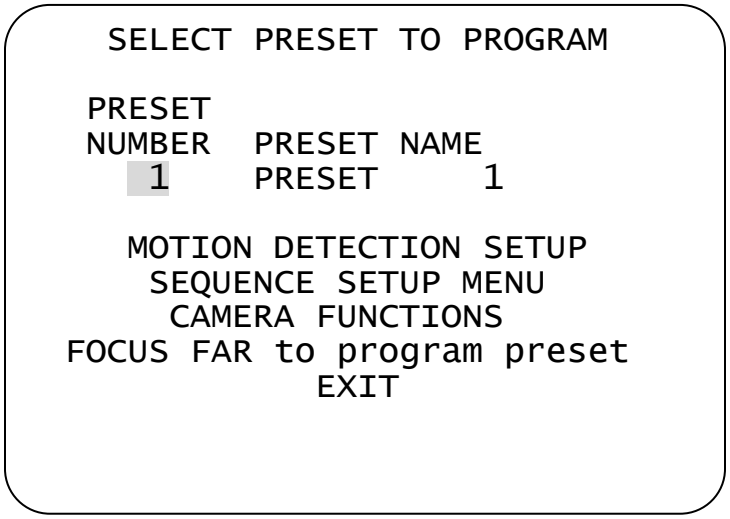
1. Select the monitor and camera number assigned to the Speed Dome Ultra 8 camera dome.
2. Use the arrow keys on the controller to scroll to the **`Camera Setup Menu`** (D4).
3. Press the **F1 (On)** key to display the *Dome Configuration Menu*.
4. Use the joystick to move the highlight to ***Alarms/Areas/Home/Presets/PZ***. Press **Set** to select.

Figure 92. Alarms / Areas / Home / Presets / PTZ screen



5. Use the joystick to move the highlight to ***Presets***. Press **Set** to select. The *Select Preset to Program* screen appears.

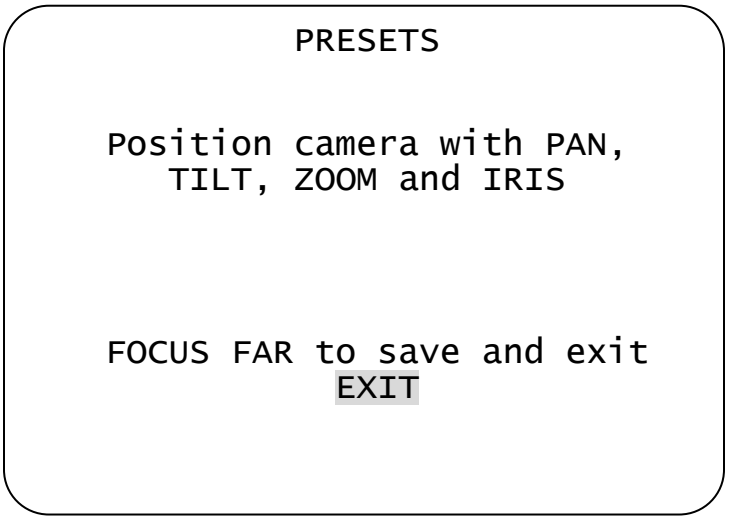
Figure 93. Select Preset To Program screen



6. Use the joystick to select the Preset you want to program. If the Preset has been programmed the dome automatically moves to that position.
   - Move the joystick right to increase the preset number.
   - Move the joystick left to decrease the preset number.

   When the correct Preset number appears, press **Set** to begin programming.
7. The *Presets* screen appears. Use the joystick to adjust the dome to the correct pan/tilt position.

Figure 94. Presets screen



IMPORTANT

If using the WV-CU550A Controller with the WJ-SX550 Multiplexer, you must press **F3 (A. Res)** to adjust the zoom, focus, or iris settings. This places the controller in normal navigating mode. Make the necessary adjustments. When finished, press **F1 (On)** to resume menu mode.

8. Press **Set** to save the Preset information.
9. To program more Presets, repeat steps 5 through 8. To exit the Dome Configuration Menu and save changes, press **F4 (Exit)**.

To verify the Preset programming, enter a Preset number (1-64) and press **Preset**.

Tested Panasonic Equipment

The following Panasonic equipment has been tested with the SpeedDome Ultra 8 camera dome:

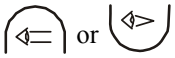
- WJ-X550 Multiplexer
- WV-CU550A Controller

Appendix E: AD Up-the-Coax (UTC) Command Summary

This appendix summarizes the AD-UTC controller commands used with the Configuration Utility. It also provides a list of additional AD-UTC commands that can be used with the dome and compatible controllers.

Command Summary

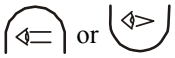
The following table lists the commands to operate the configuration utility when the dome is installed in an AD-UTC environment. The keyboard must be in programming mode to perform these functions.

If you want to …	Use …
Start the configuration utility.	**(Function,** and then **Shift+Menu)**
Move the ***highlight bar*** on the active menu.	Use the Joystick **(Pan/Tilt)**
Select the highlighted item on the active menu.	 **(Focus Far** or **Focus Near)**
Increase the value of the selected setting. For example, Red or Blue white balance values.	**(Zoom In)** or Twist joystick clockwise
Decrease the value of the selected field. For example, Red or Blue white balance values.	**(Zoom Out)** or Twist joystick counter-clockwise
Display the ***next choice*** for the setting. For example, Maximum Zoom setting.	**(Zoom In)**
Display the ***previous choice*** for the setting. For example, Maximum Zoom setting.	**(Zoom Out)**
Save changes and exit the utility from any screen.	**(Function,** and then **Shift+Clear)**

Setting Names / Working with Passwords

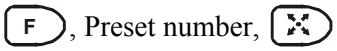
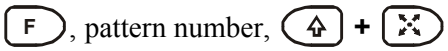
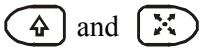
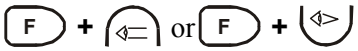
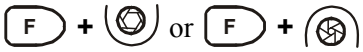
When setting names or entering password information, the screen displays the available characters in the selected languages. In these situations, the following commands are used:

If you want to …	Use …
Move the ***highlight left or right*** in the character field.	**Joystick Left/Right**
Move the ***highlight up or down*** in the character field.	**Joystick Tilt Up/Down**

If you want to …	Use …
Select the highlighted character in the character field.	 **(Focus Far** or **Focus Near)**
Move the cursor to the ***right of the current character*** in the name or password.	**(Zoom In)** or Twist joystick clockwise
Move the cursor to the ***left of the current character*** in the name.	**(Zoom Out)** or Twist joystick counter-clockwise

Additional AD-UTC Commands

The following tables summarize the special commands available when using the dome in an AD-UTC network. These commands are available when you enter the keyboard combination provided.

If you want to …	*Use …*
Program selected Preset	 **(Function**, Preset number (1-96), and then **Preset)**
Recall selected Preset	Preset number, **(**Preset number, then **Preset)**
Start selected Pattern programming	 **(Function,** pattern number (1-3), then **Shift+Preset)**
Save Pattern programming	Pattern number, **(**Pattern number (1-3), then **Function)**
Run selected Pattern continuously	Pattern number, then  **(**Pattern number, **Shift** and **Preset)**
Resume Auto Focus mode	 **(Function+Focus Far** or **Function+Focus Near)**
Resume Auto Iris mode	 **(Function+Iris Open** or **Function+Iris Close)**
Rotate dome 180° from current position (“flip”)	**(Flip)**

Supported Controllers

The following AD-UTC controllers are compatible with the SpeedDome Ultra 8 camera dome:

Controller	Presets	Patterns	DirectSet Menu
ADCC0200	96	3	Yes
ADCC0300	96	3	Yes

This list of controllers is complete as of the time of publication. Other controllers may be supported. Contact your Sales Representative for current information.

Performance Notes

The following considerations should be made when using the SpeedDome Ultra 8 camera dome in the AD-UTC environment.

Address Setting

The SpeedDome Ultra 8 camera dome must be set to address **891** to operate in the AD-UTC environment. When the dome initializes or resets, the address and protocol information (UTC_T) appear on-screen.

Accessing the DirectSet Menu

The DirectSet Menu provides easy access to certain SpeedDome Ultra 8 camera dome functions from the keyboard. Both the 35X and 22X camera domes each have four pages of settings available.

To access the DirectSet menu, select the dome, and press (**DirectSet** button).

35X Camera Dome

DirectSet Menu 1of 4

```
  0 TOGGLE DIRECT SET MENU
  1 DOME CONFIGURATION MENU
  2 AUTO IRIS & AUTO FOCUS
  3 FLIP
  4 PEEL PATTERN
  5 SET NORTH POSITION
  6 LINE LOCK OFF
  7 LINE LOCK ON
 10 NIGHT MODE
FOCUS FAR=next page
```

DirectSet Menu 2of 4

```
 11 DAY MODE
 12 AUTO DAY/NIGHT MODE
 13 WDR ON
 14 WDR OFF
 15 SMOOTH SCAN
 16 STEPPED SCAN
 17 RANDOM SCAN
 20 DOME INFORMATION
 48 EIS OFF
Use FOCUS to select page
```

DirectSet Menu 3of 4

```
 49 EIS 5  Hz
 50 EIS 10 Hz
 51 SEQUENCE  1
 52 SEQUENCE  2
 53 SEQUENCE  3
 54 SEQUENCE  4
 55 SEQUENCE  5
 56 SEQUENCE  6
 57 SEQUENCE  7
Use FOCUS to select page
```

DirectSet Menu 4of 4

```
 58 SEQUENCE  8
 59 SEQUENCE  9
 60 SEQUENCE 10
 61 SEQUENCE 11
 62 SEQUENCE 12
 63 SEQUENCE 13
 64 SEQUENCE 14
 65 SEQUENCE 15
 66 SEQUENCE 16
FOCUS NEAR=previous page
```

22X Camera Dome

DirectSet Menu 1of 4

```
  0 TOGGLE DIRECT SET MENU
  1 DOME CONFIG MENU
  2 AUTO IRIS & AUTO FOCUS
  3 FLIP
  4 PEEL PATTERN
  5 SET NORTH POSITION
  6 LINE LOCK OFF
  7 LINE LOCK ON
 15 SMOOTH SCAN
FOCUS FAR=next page
```

DirectSet Menu 2of 4

```
 16 STEPPED SCAN
 17 RANDOM SCAN
 20 DOME INFORMATION
 51 SEQUENCE  1
 52 SEQUENCE  2
 53 SEQUENCE  3
 54 SEQUENCE  4
 55 SEQUENCE  5
 56 SEQUENCE  6
Use FOCUS to select page
```

DirectSet Menu 3of 4

```
 57 SEQUENCE  7
 58 SEQUENCE  8
 59 SEQUENCE  9
 60 SEQUENCE 10
 61 SEQUENCE 11
 62 SEQUENCE 12
 63 SEQUENCE 13
 64 SEQUENCE 14
 65 SEQUENCE 15
Use FOCUS to select page
```

DirectSet Menu 4of 4

```
 66 SEQUENCE 16




FOCUS NEAR=previous page
```

Enter a number and press to use a DirectSet function. Press **Focus Far** or **Focus Near** to scroll between pages. The following table describes the options.

DirectSet Command / Menu Item	*Description*
0+ **:** Toggle DirectSet Menu	(35X/22X) Toggles between displaying and hiding the DirectSet menu.
1+ **:** Dome Config Menu	(35X/22X) Displays the SpeedDome Ultra configuration menu. Refer to the dome manual for information about the available settings.
2+ **:** Auto Iris/Auto Focus	(35X/22X) Resumes Auto Focus/Auto Iris mode.

DirectSet Command / Menu Item	Description
3+ : Flip	(35X/22X) Rotates the SpeedDome 180° from its current pointing direction. This is the same as pressing the Flip button.
4+ : Peel Pattern	(35X/22X) Runs the default Apple Peel Pattern continuously.
5+ : Set North Position	(35X/22X) Sets the North Position
6+ : Line Lock Off	(35X/22X) Turns the Line Lock Off
7+ : Line Lock On	(35X/22X) Turns the Line Lock On
10+ : Night Mode	(35X) Sets the dome IR mode setting to ON. The dome switches to full-time black-and-white (B/W) mode.
11+ : Day Mode	(35X) Sets the dome IR mode setting to OFF. The dome switches to full-time color mode.
12+ : Auto/Day Night Mode	(35X) Resumes the most recently selected automatic IR mode setting. Auto High: B/W mode activates ~30 lux. Auto Mid: B/W mode activates ~3 lux. Auto Low: B/W mode activates ~ 0.5 lux.
13+ : WDR On	(35X) Enables Wide Dynamic Range (WDR). Use this setting when both bright and low light areas need to be viewed simultaneously.
14+ : WDR Off	(35X) Disables Wide Dynamic Range (WDR). Use this setting when the light level is constant or changes in lighting conditions are gradual.
15+ : Smooth Scan	(35X/22X) Initiates a smooth scan between the left and right scan limits, starting at the left scan limit. If no scan limits have been set, initiates a smooth 360° clockwise rotation around the dome axis using the current tilt, zoom and focus settings.
16+ : Stepped Scan	(35X/22X) Initiates a scan between the left and right scan limits pausing briefly every 10° (at 1x zoom), starting at the left scan limit. When the right scan limit is reached, the scan is reversed. If no scan limits have been set, initiates a clockwise rotation around the dome axis pausing briefly every 10° (at 1x zoom) for 3 seconds using the current tilt, zoom and focus settings.
17+ : Random Scan	(35X/22X) Initiates a scan between the left and right scan limits pausing randomly between the limits. If no scan limits have been set, initiates a clockwise or counter-clockwise rotation around the dome axis using the current tilt, zoom and focus settings. The dome pauses randomly as it rotates around the axis.
20+ : Dome Information	(35X/22X) Displays the Dome Information screen available through the dome configuration menu.
48+ : EIS Off	(35X) EIS Off
49+ : EIS 5Hz	(35X) EIS 5Hz
50+ : EIS 10Hz	(35X) EIS 10Hz

DirectSet Command / Menu Item	Description
51+ : Sequence 1	(35X/22X) Sequence: Runs Sequence 1
52+ : Sequence 2	(35X/22X) Sequence: Runs Sequence 2
53+ : Sequence 3	(35X/22X) Sequence: Runs Sequence 3
54+ : Sequence 4	(35X/22X) Sequence: Runs Sequence 4
55+ : Sequence 5	(35X/22X) Sequence: Runs Sequence 5
56+ : Sequence 6	(35X/22X) Sequence: Runs Sequence 6
57+ : Sequence 7	(35X/22X) Sequence: Runs Sequence 7
58+ : Sequence 8	(35X/22X) Sequence: Runs Sequence 8
59+ : Sequence 9	(35X/22X) Sequence: Runs Sequence 9
60+ : Sequence 10	(35X/22X) Sequence: Runs Sequence 10
61+ : Sequence 11	(35X/22X) Sequence: Runs Sequence 11
62+ : Sequence 12	(35X/22X) Sequence: Runs Sequence 12
63+ : Sequence 13	(35X/22X) Sequence: Runs Sequence 13
64+ : Sequence 14	(35X/22X) Sequence: Runs Sequence 14
65+ : Sequence 15	(35X/22X) Sequence: Runs Sequence 15
66+ : Sequence 16	(35X/22X) Sequence: Runs Sequence 16

Note: You can access any DirectSet feature by entering the menu number and pressing . When a selection is made, the DirectSet menu automatically closes. To close the menu without making a selection, press .

Appendix F: Vicon Command Summary

This appendix summarizes the SpeedDome Ultra 8 camera dome features that are supported by the Vicon protocol. In addition, it provides the controller commands used with the Configuration Utility. It also provides information about tested Vicon equipment and supported Vicon features.

Supported SpeedDome Ultra 8 Camera Dome Features

With the following exceptions, the SpeedDome Ultra 8 camera dome supports the feature set described in this operator's guide when controlled with the Vicon protocol.

Unsupported SpeedDome Ultra 8Camera Dome Features

- Vicon controllers that do not support as many presets, patterns, or outputs as the SpeedDome Ultra 8 camera dome are limited to the maximum quantities they are designed to support.

Vicon Command Summary

The following table lists the Vicon controller key sequence to control the indicated SpeedDome Ultra 8 camera dome functions.

If you want to …	*Use …*
Set ***Auto Iris*** ON/OFF (LED indicates Auto Iris state: ON = AUTO)	**A/I** Toggles state
Set ***Auto Focus ON/OFF*** (LED indicates Auto Focus state: ON = AUTO)	Press and Hold **L-Spd** **A/P** Toggles state
Goto Presets	Run/Pgm switch to **RUN** **Enter 1-79 Enter**
Program Presets	Run/Pgm switch to **PGM** **Enter 1-79 Enter**
Run ***PEEL Pattern*** **and** ***Repeat***	**AUX5**
Rotate dome 180° ("Flip")	**AUX6**
Start ***Pattern 1-3 Definition***	Run/Pgm switch to **PGM** **Enter 80-82 Enter**
End ***Pattern Definition***	Run/Pgm switch to **PGM** **Enter 86 Enter**
Review Pattern	Run/Pgm switch to **PGM** **Enter 87 Enter**
Accept Pattern	Run/Pgm switch to **PGM** **Enter 88 Enter**
Run Pattern 1-3	Run/Pgm switch to **RUN** **Enter 80-82 Enter**

If you want to …	Use …
Repeat Pattern 1-3	Run/Pgm switch to **RUN** **Enter 83-85 Enter**
Set Pattern to Peel	**Enter 89 Enter**
Vphase Dome ***Note:*** The A/I LED blinks indicating that you are in the vphase mode. Enter key sequence again to turn vphase adjustment off. The A/I LED stops blinking and indicates Auto Iris State.	Run/Pgm switch to **PGM** **Enter 93 Enter** • **Pan Right** to increment • **Pan Left** to decrement
Start ***Dome Configuration Menu*** See ***Operating the Dome Configuration Menu*** on page 120.	**Enter 94 Enter**
Turn ***IR Mode On***	Run/Pgm switch to **PGM** **Enter 95 Enter**
Turn ***IR Mode Off***	Run/Pgm switch to **PGM** **Enter 96 Enter**
Reset Dome	Run/Pgm switch to **PGM** **Enter 97 Enter**
Auto Pan Left Limit See ***Setting Left and Right Auto Pan Scan Limits*** on page 121.	Run/Pgm switch to **PGM** **Enter 98 Enter**
Auto Pan Right Limit See ***Setting Left and Right Auto Pan Scan Limits*** on page 121.	Run/Pgm switch to **PGM** **Enter 99 Enter**
Auto Pan ON/OFF (LED indicates Auto Pan state: **ON** = Auto Pan is running.)	Run/Pgm switch to **RUN** **A/P** toggles state

Operating the Dome Configuration Menu

The following table lists the commands to operate the configuration utility when the dome is installed in a Vicon environment.

If you want to …	Use …
Start the configuration utility.	Run/Pgm switch to **PGM** **Enter 94 Enter**
Move the ***highlight bar*** on the active menu.	**Tilt Up/Down**
Select the highlighted item on the active menu.	**A/P** or **AUX5**
Increase the value of the selected setting. For example, Red or Blue white balance values.	**Pan Right** (or Zoom In)
Decrease the value of the selected field. For example, Red or Blue white balance values.	**Pan Left** (or Zoom Out)
Display the ***next choice*** for the setting. For example,	**Pan Right** (or Zoom In)

If you want to …	Use …
Maximum Zoom setting.	
Display the ***previous choice*** for the setting. For example, Maximum Zoom setting.	**Pan Left** (or Zoom Out)

Setting Names / Working with Passwords

When setting names or entering password information, the screen displays the available characters in the selected languages. In these situations, the following commands are used:

If you want to …	Use …
Move the ***highlight left or right*** in the character field.	**Pan Left/Right**
Move the ***highlight up or down*** in the character field.	**Tilt Up/Down**
Select the highlighted character in the character field.	**A/P**
Move the cursor to the ***right of the current character*** in the name or password.	**Pan Right** (or Zoom In)
Move the cursor to the ***left of the current character*** in the name.	**Pan Left** (or Zoom Out)

Setting Left and Right Auto Pan Scan Limits

IMPORTANT

You must program the Left Scan Limit setting before programming the Right Scan Limit setting. This procedure erases any previously programmed Right Scan Limit setting.

Programming the Scan Limits:

1. Select the camera number assigned to the SpeedDome Ultra 8 camera dome.
2. Use the pan/tilt joystick to position the dome's pointing direction to the Left Scan Limit.
3. Set Run/Pgm switch to **Pgm**.
4. Enter **Set Preset 98** to save the setting.
5. Position the dome's pointing direction by panning right to Right Scan Limit.
6. Enter **Set Preset 99** to save the setting.
7. Set Run/Pgm switch to **Run**.

Note: If both the **Left** and **Right** scan limits are set to the same position, the dome continuously pans to the right when ***Auto Pan*** is activated.

Setting the Auto Pan Speed

1. Press and hold **A/P** key.
2. Move joystick to **Pan Right** until the desired speed is observed on the monitor.
3. Release the **A/P** key.
4. Release the joystick.

Activating Auto Pan

Auto Pan allows the dome to continuously pan between the left and right scan limit settings. To start Auto Pan, press the **A/P** key. If no scan limit settings are programmed, the dome pans to the right continuously.

Note: Auto Pan will be cancelled if the operator issues a Pan, Flip, Preset, or Pattern command.

Tested Vicon Equipment

The following Vicon equipment has been tested with the SpeedDome Ultra 8 camera dome:

- Vicon 1300 CPU Systems
- Vicon 1400 CPU Systems
- Vicon 1500 CPU Systems
- Vicon VPS 324

Appendix G: Bosch Biphase Protocol

The following Bosch equipment has been tested with the SpeedDome Ultra 8 camera dome:

- Phillips/Bosch LTC5136 Controller

To use the Bosch Biphase protocol, the dome address switches must be set to the address range 1–399. Once the dome receives commands, it auto-detects the Biphase protocol.

Standard Biphase keyboard commands:

If you want to …	*Use …*
Pan, Tilt, Zoom, Focus, Iris	Press designated keyboard keys.
AutoPan	ON/OFF-2-ENTER Any Pan or Tilt command will cancel AutoPan.
Left Scan Limit Set	Off-90-ENTER, SET-101-ENTER
Right Scan Limit Set	Off-90-ENTER, SET-102-ENTER
Preset Call	SHOT-1-99-ENTER
Preset Save	SET-1-99-ENTER
Relay Output	ON/OFF-65-ENTER
Record A	ON/OFF-100-ENTER
Record B	ON/OFF-101-ENTER
Continuous Playback A	ON/OFF-50-ENTER
Playback A	ON/OFF-51-ENTER
Continuous Playback B	ON/OFF-52-ENTER
Playback B	ON/OFF-53-ENTER
AutoPan Speed	ON/OFF-14-ENTER To set the speed, press ON-14-ENTER. Move the joystick to the required speed and, while maintaining that speed, press OFF-14-ENTER.
Auto Iris	ON-3-ENTER Pressing either the Iris OPEN or CLOSE key will place Iris in manual.
Auto Focus	ON-4-ENTER Pressing either the Focus NEAR or FAR key will place Focus in manual.
Electronic Image Stabilization (EIS)	ON/OFF-24-ENTER

SpeedDome Ultra 8 non-standard keyboard commands:

If you want to …	*Use …*
Flip	ON-18-ENTER
Auto Focus/Iris	ON-11-ENTER
Dome Configuration Menu	ON-46-ENTER Navigation while in the menus uses normal SpeedDome Ultra 8 navigation commands, except that either Focus key can be used for the menu navigation Enter. OFF-46-ENTER performs a Quit and Save function.
Display Dome Information Screen	ON/OFF-66-ENTER
Reset Dome	OFF-90-ENTER, ON-1022-ENTER
Init Dome	OFF-90-ENTER, ON-1023-ENTER

Appendix H: Dome Configuration Records

Use the pages in this appendix to record the configuration settings for your SpeedDome Ultra 8 camera dome. Make copies of these pages for each dome. Whenever you change settings for a dome, update the information recorded on these pages.

In This Appendix

- Pan / Tilt / Zoom / Sync Options 126
- Camera Functions 126
- Set Alarm Actions 126
- Set Alarm States 126
- Set Home Position 127
- Set North Position 127
- Area Boundaries 127
- Privacy Zones 127
- Scan Limits 127
- On-Screen Text Display 128
- Text Attribute Options 128
- Language / Password 128
- Name Configuration 128
- Presets 129
- Dome Information 131

Configuration Settings

Pan / Tilt / Zoom / Sync Options

Menu Item	Default Setting (Choices)	Current Setting
Proportional Flip	**Off** (On / Off)	
1st Zoom Stop X	(35X camera) **52** (35 / 52) (22X camera) **33** (22 / 33)	
Max Total Zoom X	(35X camera) **140** (70 - 420) (22X camera) **88** (44 - 242)	
Line Lock	**On** (On / Off)	
Freeze Frame	**Off** (Off/On)	

Camera Functions

Menu Item	Default Setting (Choices)	Current Setting
Auto White Bal	**On** (On / Off)	
White Bal Adj: Red [1]	0-511	
White Bal Adj: Blue [1]	0-511	
IR Mode	**Auto Mid** (Off/On/Auto High/Auto Mid/ Auto Low)	
WDR	**Off** (Off/On)	
AGC/Shutter	**Open Shutter** (AGC On/AGC Off/Open Shutter)	
Max Gain [2]	(35X camera) **26** (10-32dB) (22X camera) **28** (0-28dB)	
Limit [3]	**1/4** (1/2 - 1/60 NTSC) **1/3** (2/3 - 1/50 PAL)	

[1] Auto White Bal must be set to Off to use these settings.
[2] AGC On or Open Shutter must be active to use this setting.
[3] Open Shutter must be active to use this setting.

Set Alarm Actions

Menu Item	Default Setting (Choices)	Current Setting
Alarm No. 1	**No Action** (Preset 1-96 / Pattern 1-3 / Output 1-3/Random-Scan/Stepped Scan/Smooth-Scan/Sequence 1-16/ No Action)	
Alarm No. 2	**No Action** (Preset 1-96 / Pattern 1-3 / Output 1-3/Random-Scan/Stepped Scan/Smooth-Scan/Sequence 1-16/ No Action)	
Alarm No. 3	**No Action** (Preset 1-96 / Pattern 1-3 / Output 1-3/Random-Scan/Stepped Scan/Smooth-Scan/Sequence 1-16/ No Action)	
Alarm No. 4	**No Action** (Preset 1-96 / Pattern 1-3 / Output 1-3/Random-Scan/Stepped Scan/Smooth-Scan/Sequence 1-16/ No Action)	
Send Inputs to Host	**Yes** (Yes / No)	

Set Alarm States

Menu Item	Default Setting (Choices)	Current Setting
Input No. 1	**Open** (Open / Closed)	
Input No. 2	**Open** (Open / Closed)	
Input No. 3	**Open** (Open / Closed)	
Input No. 4	**Open** (Open / Closed)	

Set Home Position

Menu Item	Default Setting (Choices)	Current Setting
Home Position	**No Action** (Preset 1-96/ Pattern 1-3 / No Action)	
Return Time (Mins) [4]	**10** (1-60 Minutes)	

[4] **Home Position must be set to Preset or Pattern for this setting to apply.**

Set North Position

Describe North position:	

Area Boundaries

16 areas can be programmed. Identify the start and end points of each area to assist you in restoring the boundaries if the areas were erased.

Area Number	Start Point	End Point
Area 1		
Area 2		
Area 3		
Area 4		
Area 5		
Area 6		
Area 7		
Area 8		
Area 9		
Area 10		
Area 11		
Area 12		
Area 13		
Area 14		
Area 15		
Area 16		

Privacy Zones

Eight Privacy Zones can be programmed. Identify the Privacy Zones and areas being obscured.

Number	Description
Zone 1	
Zone 2	
Zone 3	
Zone 4	
Zone 5	
Zone 6	
Zone 7	
Zone 8	

Scan Limits

Scan Limit	Description
Left	
Right	

On-Screen Text Display

Menu Item	Default Setting (Choices)	Current Setting
Status Display	**Off** (On / Off)	
Disable All Names	**No** (Yes / No)	
Diagnostic Display	**Off** (On / Off)	
Direction Indicator	**Off** (On / Off)	

Text Attribute Options

Menu Item	Default Setting (Choices)	Current Setting
Character Outline	**On** (On / Off)	
Translucent Names	**On** (On / Off)	

Language / Password

Menu Item	Default Setting (Choices)	Current Setting
Language Selection	**English (**English / Spanish / French / German / Italian / Portuguese)	
Password Protection	**Off** (On / Off)	

Note: The SpeedDome Ultra 8 camera dome password should be provided to authorized operators only.

Name Configuration

Menu Item	Default Setting (Choices)	Current Setting
Camera Name	**Off** (On / Off)	
Area Name	**Off** (On / Off)	
Area No. 1	Area 1	
Area No. 2	Area 2	
Area No. 3	Area 3	
Area No. 4	Area 4	
Area No. 5	Area 5	
Area No. 6	Area 6	
Area No. 7	Area 7	
Area No. 8	Area 8	
Area No. 9	Area 9	
Area No. 10	Area 10	
Area No. 11	Area 11	
Area No. 12	Area 12	
Area No. 13	Area 13	
Area No. 14	Area 14	
Area No. 15	Area 15	
Area No. 16	Area 16	
Preset Name	**Off** (On / Off)	
REFER TO PRESET WORKSHEET FOR NAME SETTINGS (page 129)		
Pattern Name	**Off** (On / Off)	
Pattern No. 1	Pattern 1	
Pattern No. 2	Pattern 2	
Pattern No. 3	Pattern 3	
Alarm Name	**On** (On / Off)	
Alarm No. 1	Alarm 1	

Menu Item	Default Setting (Choices)	Current Setting
Alarm No. 2	Alarm 2	
Alarm No. 3	Alarm 3	
Alarm No. 4	Alarm 4	

Presets

Up to 96 presets may be programmed for each dome. Describe the scene being viewed for each preset to assist you in restoring the presets if they were erased.

Preset Number	Description	Assigned Name
Preset 1		
Preset 2		
Preset 3		
Preset 4		
Preset 5		
Preset 6		
Preset 7		
Preset 8		
Preset 9		
Preset 10		
Preset 11		
Preset 12		
Preset 13		
Preset 14		
Preset 15		
Preset 16		
Preset 17		
Preset 18		
Preset 19		
Preset 20		
Preset 21		
Preset 22		
Preset 23		
Preset 24		
Preset 25		
Preset 26		
Preset 27		
Preset 28		
Preset 29		
Preset 30		
Preset 31		
Preset 32		
Preset 33		
Preset 34		
Preset 35		
Preset 36		
Preset 37		
Preset 38		
Preset 39		
Preset 40		
Preset 41		
Preset 42		
Preset 43		
Preset 44		

Preset Number	Description	Assigned Name
Preset 45		
Preset 46		
Preset 47		
Preset 48		
Preset 49		
Preset 50		
Preset 51		
Preset 52		
Preset 53		
Preset 54		
Preset 55		
Preset 56		
Preset 57		
Preset 58		
Preset 59		
Preset 60		
Preset 61		
Preset 62		
Preset 63		
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Preset 78		
Preset 79		
Preset 80		
Preset 81		
Preset 82		
Preset 83		
Preset 84		
Preset 85		
Preset 86		
Preset 87		
Preset 88		
Preset 89		
Preset 90		
Preset 91		
Preset 92		
Preset 93		
Preset 94		
Preset 95		
Preset 96		

Dome Information

Record the information found on the *Dome Model* screen. The information on this screen cannot be modified and is provided for service use.

Item	Device Information
Name:	
Mnemonic:	
Software Version:	
FPGA Version	
Device Type:	
Camera	
Serial Number (SN):	
Manufacture Date:	

Appendix I: End User License Agreement

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Glossary

Alarm Actions

The assigned responses for the dome when inputs change from normal to abnormal states. The dome may run a *Preset*, *Pattern*, or have no assigned action for each of the four dome inputs. The dome may also send alarm states to the host controller for processing. See also *Input* and *Normal Input State*.

Apple Peel Pattern

The default pattern of the SpeedDome Ultra 8 camera dome. This pattern consists of three complete revolutions starting at the ceiling line and tilting down 30° each revolution.

Areas

Programmed start and end points of the dome's field of view around its pan axis. Each area is a part of a circular viewing area that extends around the dome. The areas can be different sizes. Up to 16 areas can be programmed for the dome.

Automatic "Flip" feature

Allows the dome to automatically turn 180 degrees when the camera tilts to its lower limit and stays in that position for a brief delay. When the dome flips (rotates), the camera starts moving upward as long as the tilt control is kept in the down position. Once the control is released, the tilt control returns to its normal operational mode. The flip feature is useful when you need to track someone who walks directly beneath the dome and continues on the other side. This is also referred to as "proportional flip."

Automatic Gain Control (AGC)

Allows for the amplification of the video signal in scenes with minimal ambient light. Many low-light scenes result in picture noise. As gain is increased, the picture noise is also amplified. When AGC is enabled, the value of the gain setting is based on feedback from the camera. When AGC is disabled, the camera uses the value set for the manual gain setting. The trade-off between picture level and noise may be adjusted when AGC is disabled. See also *Open Shutter*.

Black and White Mode

See *IR Mode.*

Configuration Utility

The text overlay menu system used for setting dome features. The utility is accessed using a keystroke combination. The utility provides settings for camera functions, zoom, alarms, text display, and password protection.

Direction Indicators

Provides for the display of the camera dome's pointing direction based on the North setting. This information appears on the top line of the monitor when the setting is enabled. In addition, the tilt setting appears on the left side of the monitor. By default, North is set to 0° Pan/Tilt. This setting may be changed using the *Set North Position* setting. See also *North Position*.

DirectSet Menu

A special menu that provides access to commonly used features and functions when used with compatible controllers. This allows for changing or activating features without starting the dome configuration menu.

Dome Information

A Dome Configuration Menu choice that provides essential information about the SpeedDome Ultra VI camera dome if service is required. When you view this screen, you can determine the dome type, mnemonic, software version, serial number, and manufacture date. The information on this screen cannot be modified. See *Dome Statistics*.

Dome Statistics

A feature that identifies the operating statistics for the dome. The information displayed represents either runtime in seconds or number of occurrences. See *Dome Information*.

Dome Status Information

Relates to zoom, focus, and iris settings. You may choose to have this information displayed on the monitor when any of these settings change. If display of status information is enabled, it appears in the upper left corner of the monitor.

Flip

To automatically rotate the dome 180° from its current pointing position. *See Automatic "Flip" feature.*

Freeze Frame

A feature that allows the current image to be maintained on-screen when switching to a preset or pattern. This function prevents the display of the dome movement and lens adjustments while the preset or pattern position is sought. Once the preset or pattern is ready for display, the image switches smoothly to the new scene. See *Preset* and *Pattern.*

Home Position

The default position to which the dome returns after an assigned period of inactivity passes. The default position may be a *Preset*, *Pattern*, or *No Action*.

Input

A connection point on the dome that enables the system to monitor *Input Devices*. There are four inputs available for the dome.

Input Devices

External devices that provide information about the condition of system components connected to the inputs on the dome. Typical input devices include door contacts, motion detectors and smoke detectors.

IR Mode

A feature of the camera that permits manual or automatic switching between color and IR (black-and-white) operation. When IR mode is active, clearer images may be obtained under low-light conditions.

Line Lock

Allows you to phase lock the video with the AC power line. When line lock is enabled, it prevents vertical video rolling when switching multiple cameras to a single monitor. If text appears slightly tinted on color monitors, disabling the line lock may prevent this problem.

Name Information

Relates to the display the dome name, the area where the dome is pointing, the name of the preset or pattern that is running, and alarm names. The display of each type of name setting can be enabled or disabled. When the display of camera or area names is enabled, the information appears on the screen continuously. Preset, pattern, and alarm names appear only while they are active.

Normal Input State

Describes the expected state of a device connected to one of four dome inputs. The normal state may be *open* or *closed*. When a device is not in its normal input state, an alarm is issued. Transmitting the dome input states to the host controller is not supported with Manchester.

North Position

User-definable setting that may correspond to magnetic north or some well-known landmark. Used to approximate the camera dome's pointing direction when *Direction Indicators* are enabled.

Open Shutter

Setting used to improve the quality of video obtained in extreme low-light situations. When the Open Shutter setting is enabled, low-light information is collected over multiple fields based on the *Shutter Limit* setting. As a result, video may appear blurred or choppy in extreme low-light situations. This setting does not effect camera operation in normal lighting situations. See also *Automatic Gain Control (AGC)*.

Password Protection

Prevents unauthorized users from starting the *Configuration Utility*. The password may be from 1 to 8 characters long.

Pattern

A series of pan, tilt, zoom and focus movements from a single programmable dome. Up to 3 patterns may be programmed for the dome.

Peel

Button found on some controllers that initiates the Apple Peel pattern. *See Apple Peel Pattern.*

Preset

Programmed video scene, based on a specific pan, tilt, zoom, and focus settings. Up to 96 presets may be programmed for the dome. For domes running in a Manchester network, only 64 presets may be programmed. See also *Virtual Views.*

Privacy Zones

Masked areas of the camera dome's viewing area. These masks prevent operators of the surveillance system from viewing these designated zones. Each Privacy Zone has four sides, and the zones may overlap to form irregular shapes. The Privacy Zones move in relation to the dome pan/tilt position. In addition, the apparent size of the Privacy Zone adjusts automatically as the lens zooms in or out. Up to eight Privacy Zones may be established for a camera dome.

Random Scan

An automated scan that pans randomly between the left and right scan limits, starting at any point between the scan limits. See *Smooth Scan* and *Stepped Scan*.

Scan

Automated surveillance between predefined scan limits. Three types of scans are available: smooth scan, stepped scan, and random scan. See *Smooth Scan*, *Stepped Scan*, and *Random Scan*.

Scan Limits

Two points around the dome’s pan axis, which define a surveillance area.

Shutter Limit

Setting used to define the maximum exposure time for the *Open Shutter* setting. The values for the setting range from 1/2 to 1/60 for NTSC, and 2/3 to 1/50 for PAL. The default setting is 1/4 for NTSC and 1/3 for PAL.

Smooth Scan	An automated scan that slowly pans between the left and right scan limits, starting at the left scan limit. When the right scan limit is reached, the scan reverses. See *Stepped Scan* and *Random Scan*.
Stepped Scan	An automated scan that pans slowly pausing momentarily every 10° between the left and right scan limits. Once the right scan limit is reached, the scan reverses. See *Smooth Scan* and *Random Scan*.
Virtual Views	Similar to *Preset*. However, virtual views store the pan, tilt, zoom, focus, and iris settings within the controller, not the dome. Virtual Views **cannot** be used for the *Home Position* or *Alarm Actions*.
White balance	Adjustments in the color hue (red and blue) gains for a camera so that true white appears white in the image. It is normally compensated for by the automatic gain control. In some lighting conditions, you may need to manually adjust the red and blue settings for optimal viewing. When Automatic White Balance is enabled, the camera measures the image and automatically adjusts the red and blue settings to balance white. When Automatic White Balance is disabled, the camera uses the values set for the red and blue settings to balance white.
Wide Dynamic Range (WDR)	A feature of the camera that allows a scene with both bright and low light areas to be viewed simultaneously.
Zoom	To adjust the magnification of the camera lens to make an object appear closer (larger) or farther away (smaller). See also *Zoom stop factors*.
Zoom stop factors	Defines how the zoom function is partitioned. The first zoom stop setting may be 22X or 35X. The default first zoom stop setting is 35X. The default maximum zoom stop setting is 92X.

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